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CONTENTS

	PAGE
Editorial Notes	1
Railways Should Plan Capital Expenditure Now	3
End of Railway & Canal Commission	3
Nationalisation of Buses	4
Standardisation of Rolling Stock	5
Letters to the Editor	6
The Scrap Heap	7
Overseas Railway Affairs	8
Reorganisation in Scottish Region, British Railways	11
The Swindon "Castle" Class Locomotives	12
An Important Source of Track Ballast	14
Reconstruction of Rhine Bridge at Düsseldorf	17
Personal	19
Rolling Stock Standardisation, British Railways	23
The Leopoldina Railway Co. Ltd.	24
Notes and News	26

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THE RAILWAY GAZETTE

33, TOTHILL STREET, WESTMINSTER, S.W.1.

Sir Cyril Hurcomb on State Transport's First Year

THE importance of the railway system in the transport organisation of this country is clearly implicated by the prominence given it by Sir Cyril Hurcomb in his New Year message to British Transport Commission staff, which is reproduced on page 21. The Chairman of the Commission laid some stress on the fact that it was the duty of the Commission to make the new nationalised undertaking self-supporting, and he drew attention to the decline in railway earnings during the past year. He said it was clear that they were falling far short of expectations; at the end of November the railways' additional earnings had only just reached £34 million compared with the extra £65 million which, in October, 1947, when fares and charges were increased, it had been estimated that they would have to earn to make ends meet. Because the railways brought in a very high proportion of the income accruing to the Commission, this shortfall was bound to have a serious effect on the Commission's finances generally. He also complimented the Railway Executive on the steps it had taken to reintroduce a measure of cheap fare facilities.

* * * * *

The New Year Honours

The New Year Honours List contains the names of a number of recipients of transport and industrial interest. Two of the Knights Bachelor, for example, are Mr. J. H. Goddard, President of the Machine Tool Trades Association, and Dr. H. L. Guy, who is Secretary of the Institution of Mechanical Engineers. Among those who receive the C.B.E. are Mr. Harold Wilmot, President of the Locomotive Manufacturers' Association, Mr. O. V. S. Bulleid, C.M.E., Southern Region, British Railways, and Mr. J. E. S. Bodger, who, until recently, was General Manager of the Ceylon Government Railway. In the list of those on whom the O.B.E. is to be conferred are Mr. A. Busby, Assistant General Manager, Nigerian Railway, Mr. A. M. Newbold, General Agent in France, British Railways, and Mr. A. Lane, Chief of Police, Western Region. The same honour is awarded Lt-Colonel E. Woodhouse, one of the Ministry of Transport's Inspecting Officers of Railways, and Mr. J. H. Brown, Head of the Appointments Department of the Crown Agents for the Colonies. Mr. N. F. Shillingford, who is Chief Accounts & Finance Officer, Rhodesia Railways, also receives the O.B.E. in recognition of public services; Mr. R. Bailey, Joint Managing Director of Charles Roberts & Co. Ltd., the well-known wagon builders, is in the same list.

* * * * *

Shortage of Industrial Capital

One of the most urgent problems facing industry is the lack of capital to replace or modernise fixed assets and to maintain or expand current production. The primary cause of this shortage is the fact that prices, in general, have risen to more than 200 per cent. of pre-war level, coupled with the high rate of corporate taxation. The Federation of British Industries has sent a memorandum to the Chancellor of the Exchequer drawing attention to the problem, which falls into two parts: the need to ensure that taxation is levied on profits only after proper provision for maintenance and replacement of raw materials, buildings, plant, and machinery, and, secondly, the need to frame the incidence of tax so that industry can provide additional working capital from its own resources. It suggests an official inquiry to examine the practicability of adopting a basis for calculating profits which would take care of marked changes in the value of money. More immediately, it urges that a special allowance should be granted in the form of a fixed sum in arriving at profits to deal with the replacement of fixed assets. To assist businesses to finance re-stocking there should be a substantial reduction in taxation on profits withheld from distribution with this object.

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Argentine Railways and British Staffs

It is increasingly clear that the future of British staffs on the formerly British-owned Argentine railways is becoming ever less attractive. The changes which have been made in the organisation of the lines during the past year, since the railways passed into the control and ownership of the State,

have tended, perhaps naturally, to favour the employment and promotion of Argentine nationals. It seems likely that in the near future many more British employees will be seeking other spheres of activity. When the lines first passed to the State, a form of organisation was evolved which we commended on the grounds of its simplicity and potential effectiveness. This provided for a Special Commission, responsible for finance and the laying down of general policy, superimposed on an Executive Committee responsible for the operation of the railways and consisting of the General Managers of the lines, with an independent Chairman. Details of this organisation were given in our April 30 issue.

* * * *

Recent Changes in Conditions

In the second half of 1948 nationalist aspirations led to a more direct control of the railways and the abolition of the Executive Committee. The Transport Secretariat was created, responsible for the running of all railways, and, among others, it took over the functions of the Special Commission and the Executive Committee. Originally, at the time the lines were taken over, personnel employed by the British railways before the transfer of ownership had received offers of contracts for service for five years, and it had been understood that these contracts would be renewed for further similar term, provided the service had been efficient. It is not clear from information available so far whether these contracts are still operative, but there seems reason to presume that if they have not been rescinded the conditions obtaining on the Argentine railways at the present time, so far as European staff is concerned, are not such as to encourage personnel to stay even if they are not actually forced to leave.

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Overseas Railway Traffics

A further increase in working expenses was encountered by the Canadian Pacific Railway during the month of November, when liabilities amounted to £7,270,500, as compared with £6,020,000 for the equivalent period of 1947. As, however, there was a £1,724,250 improvement in gross earnings, C.P.R. net receipts advanced by £473,750, to £1,262,500. With only four weeks to the close of the financial year, C.P.R. aggregate net earnings, at £4,134,000, are £608,250 below those for the previous year, despite the £8,547,750 increase in gross earnings, which now amount to £81,043,000. During the fortnight ended December 26, Antofagasta (Chili) & Bolivia traffics were £72,680 and £62,510, so that receipts were up by £17,156, and since January 1 have advanced by £557,356 to £2,890,170. Another substantial gain was made in Gold Coast receipts during November, when traffics amounting to £246,162 brought the total to date, up to £1,648,016, or £459,522 above those for 1947. Dorada Railway receipts during November were £32,667, as compared with £24,300 for the equivalent period of the previous year, but still show a decline on the aggregate, where receipts of £305,908 are down by £19,292.

* * * *

Retirement of European Officers in Pakistan

The Government of Pakistan has decided to extend the right to retire prematurely, to European officers of non-Pakistan or non-Indian domicile in permanent Government service, other than in services previously under the rule-making control of the Secretary of State for India. Officers who so retire will receive pension, gratuity, or provident fund benefits admissible to them as if their posts had been abolished without provision of alternative employment. They will be eligible for any leave preparatory to retirement normally admissible. His Majesty's Government in the United Kingdom has agreed to bear any extra cost to the Central and Provincial Governments of Pakistan, and to meet the cost of free repatriation passages for officers and their families, exercising the right of premature retirement, who are not entitled to such passages. It is stated that officers wishing to retire under this scheme will be released as soon as possible, but that releases may require to be staggered in the interests of the public service; however, except in the case of certain technical officers (of the electrical, mechanical, and signal engineering departments of the railways), whose

releases may require to be staggered over two years, all will be released from service within twelve months of application at the latest.

* * * *

The Saturday Bus Strike

Efforts made last week by the London Transport Executive and the T.G.W.U. failed to avert the strike of London busmen on Saturday. Lord Latham issued a warning on Monday night that any man who failed to carry out the terms and conditions of his employment would terminate his employment by such action. London Transport busmen also have been lectured and admonished by the daily press for last Saturday's strike. We, however, have a certain amount of sympathy for them. Their action has had one good effect in bringing home to everyone the present gross unfairness of granting a five-day week to a large proportion of the employed population, but not to all. Those enjoying a five-day week, expect on Saturdays bus and rail transport to be functioning, shops to be open, and theatres and cinemas, and all other facilities for sport and entertainment. The five-day week is helping to ruin the country. A complete shut-down like an old-time Scottish sabbath, no trains, no buses, no shops, no restaurants, no private motoring, no entertainments, no B.B.C., in fact nothing to do but stay at home, go to church, or go for walks would soon make the five-day week anathema.

* * * *

A Permanent Bridge Reconstruction in Germany

An important post-war reconstruction work in the British Zone of Germany was recently completed in the rebuilding of one of the twin double-line bridges over the Rhine at Düsseldorf, described elsewhere in this issue. As no new material could be made available, spans from the other twin bridge had to be used. This entailed (a) the lifting from river bed through a height of about 50 ft. of one end of a 355-ft. spandrel-braced arch span weighing nearly 1,000 tons, the lift involved being about 700 tons; (b) the construction of runways on heavy steel piling and girders to carry this 1,000-ton structure across the intervening 105 ft. between the twin bridges; and (c) the erection of even more extensive and elaborate staging to carry another of the 1,000-ton spans, not only across the 105-ft. gap, but also 355 ft. longitudinally. One of the ancillary jobs also gave rise to considerable anxiety, namely (1) the erection of a 20-ton derrick with a 90-ft. boom on staging placed across the top chords of the sloping arch span lying with one end partly submerged on the river-bed, inclined at 1 in 7 longitudinally and 10 ft. out of plumb, and with no certainty as to the stability of the end support afforded by the bed of the river; and (2) the erection of a 700-ton gantry crane astride the submerged span.

* * * *

Reorganisation of Scottish Region, British Railways

Elsewhere in this issue we give details of a scheme of reorganisation for the Scottish Region of British Railways introduced by the Railway Executive with the object of simplifying arrangements for commercial contact with the public and for inter-departmental working. District boundaries of one department wherever possible will correspond with the district boundaries of other departments. There is also a reorganisation of the S. & T. arrangements resulting in six areas instead of eight. Under the new scheme commercial and operating arrangements in Glasgow have been the subject of special provision aimed at strengthening and simplifying contact with the public. Glasgow now will have two District Commercial Officers, namely, District Goods Manager and District Passenger Manager, for all British Railways interests, while one District Operating Officer will take charge of all operating matters for the Glasgow area. Similarly in Edinburgh one District Operating and one District Commercial Officer replaces three District Officers previously maintained. The principle of joint Commercial & Operating District supervision by the former L.M.S.R. and L.N.E.R. organisations in the smaller Scottish districts is preserved. The number of such districts has been reduced from eight to four. Two instances in which Motive Power Districts require for technical reasons to be duplicated within existing Commercial & Operating Districts are at Glasgow and Ayr.

Western Region Gas Turbine Progress

Two years ago, the G.W.R. decided to experiment with gas turbine-electric traction units, and, with this object in view, orders for two locomotives of this type were placed with the Metropolitan-Vickers Electrical Co. Ltd., and British Brown-Boveri Limited. Diagrams of these units are in course of preparation and will be reproduced in our next issue. A description of the proposed Brown-Boveri unit, which remains more or less of the same design as the original and should be ready for trial runs in Switzerland in June this year, was given in our November 22, 1946, issue, while in our issue of January 24, 1947, particulars were given of the Metropolitan-Vickers locomotive as originally decided on. This unit, however, differs considerably from the first design. Among other advantages the combined thermal efficiency of turbine and compressor has been increased to yield the same overall efficiency without a heat exchanger as the first design could offer with such a device. Reduction in weight of the prime mover has permitted the installation of a unit of increased power, with transmission equipment of higher continuously rated tractive effort, without increasing the locomotive weight, despite substitution of cast iron and steel for aluminium alloy in the compressor. Progress has been made in the design of the mechanical parts of the locomotive, and the construction of the new power unit has reached an advanced stage.

* * * *

British Railways Should Plan Capital Expenditure Now

IT is now generally accepted that fluctuations in trade are caused primarily by fluctuations in expenditure on capital equipment. Changes in the demand for consumer goods are a consequence rather than a cause of the trade cycle. During the past three years the situation has been complicated by the unbalanced state of international trade and also by the accumulation of an unsatisfied demand from the war years. It would, however, be fair to say that the post-war state of inflation in Great Britain has been greatly aggravated, if it has not in fact been caused, by a policy of excessive and indiscriminate capital expenditure which was pursued during the first two years of office of the present Government.

Since the replacement of Mr. Dalton by Sir Stafford Cripps as Chancellor of the Exchequer, however, some attempt has been made to follow a "disinflationary" policy, and there has been a drastic reduction in expenditure on capital equipment. Among other industries and services, the railways have been obliged to suspend any capital programme which they may have had. There have been one or two exceptions to this rule, notably the Manchester-Sheffield and Liverpool Street-Shenfield electrification schemes, but these were both in an advanced state and in any case are proceeding at a very slow pace.

This general ban on capital expenditure may be regrettable, but it is undoubtedly necessary; in fact, it is extremely questionable whether the Cripps policy of disinflation has gone far enough. It will not be surprising if the policy is quietly abandoned for a fresh bout of Daltonian inflation. Disinflation has never been popular with the back-benchers of the Labour Party, and it is unlikely that they will find it any easier to swallow when there is an election in sight. If, however, a return to inflationary conditions is tolerated by the Government it will mean nothing but disaster for the economic state of the country. On a long term view it would, of course, be highly desirable to proceed with any capital schemes calculated to increase productivity and to postpone for many years the satisfaction of consumer demand. Such a policy, however, would have to be accompanied by an enforced general reduction of wages and salaries if serious inflation was to be avoided. It must, therefore, be ruled out, however attractive it may be from a purely economic point of view.

The only serious argument which can be advanced in favour of nationalisation of an industry is that it gives the Government an opportunity of countering the trade cycle. Capital expenditure in the nationalised industries should, in theory, be concentrated in years of trade depression; in other words,

at a time when a privately-owned firm would be unable to take the risk of financing an ambitious capital programme.

It may equally well be argued that, to achieve this object, it is not necessary to resort to nationalisation. Government financial intervention would be just as feasible with industry remaining in the hands of the industrialists provided that Government had at its disposal an adequate economic advisory service.

However, faced as we are with a nationalised transport system, what is the outlook for capital development schemes? As long as inflationary conditions prevail we must accept severe restrictions, but as soon as there are signs of a general deflation, the British Transport Commission should be ready to push ahead with appropriate schemes of development, and the Government must be prepared to provide the necessary financial backing.

The important point is that, although the transition from inflation to deflation may not occur for several years, it may be surprisingly rapid when it does take place. Since the preparation of a major scheme, such as the electrification of an important line, the construction of a new marshalling yard, or the rebuilding of a large station, takes a considerable time, it would be highly desirable if the Railway Executive could prepare detailed plans of new development schemes in order of priority. There would be no harm, either, in publishing information about such schemes, even if we have to wait a long time before any of them are realised. To have plans ready would at least prevent the Railway Executive being caught unprepared when the necessity for action arises.

* * * *

End of Railway & Canal Commission

THE Railway & Canal Traffic Act, 1854, is the foundation of the jurisdiction of the present Railway & Canal Commission, a Bill for the abolition of which is now before Parliament and which in all probability will be passed into law during the present Session. The Act of 1854 was passed at a time when it had become obvious that as regards passenger traffic, and to a lesser degree as regards merchandise traffic, monopoly of the railways was inevitable, and Section 2 enunciates two principles: (1) that every railway and canal company shall afford all reasonable facilities for the receiving, forwarding, and delivering of traffic; (2) that no such company shall make or give any undue or unreasonable preference or advantage; and these principles are substantially effective at the present time. The duty of enforcing the principles was given exclusively to the Court of Common Pleas to which summary application might be made by "any person complaining" of a violation of the Act.

The Judges of the day were loud in their protestations of their unfitness for the new duties sought to be imposed on them. The Lord Chief Justice (Lord Campbell) stated in the House of Lords during the debate on the Bill that the judges were unanimous in agreeing that these duties were not "judicial duties" at all, and he pointed out that the judges had no statutory or common law authority to which they were referred, no decisions of their predecessors to guide them, and that to be able satisfactorily to discharge their new functions they "must go as apprentices to civil engineers." The Act, indeed, left everything to the discretion of the Tribunal before which any particular case might come without any power of appeal.

Notwithstanding the railway monopoly, it was thought, however, that the provisions of the Act of 1854, coupled with competition between railway companies themselves and the adaptability of canals for the heavier classes of traffic, together would afford a reasonable measure of protection against abuse, but between 1854 and 1870 numerous schemes came before Parliament for the amalgamation of railways, and this led to the appointment in 1872 of a Joint Select Committee of both Houses "to inquire into the subject of the amalgamation of railway companies with special reference to the Bills for that purpose now before Parliament and to consider whether any and what regulations should be imposed by Parliament in the event of such amalgamation being sanctioned."

In its report the committee refers to complaints made to it regarding the difficulty and expense of enforcing in the Courts the provisions of the Act of 1854 relating to facilities and un-

due preference which were such as to deter any but wealthy traders who have a great interest at stake from contesting cases with powerful railway companies. Furthermore, questions of undue preference were often so technical, so dependent on special circumstances of railway management, and so obviously connected with the question of due facilities, as to lead to the conclusion that these provisions had not been as much brought into play as would have been the case if speedy and summary reference could have been made to a tribunal having technical knowledge of the subject.

Accordingly, one of the recommendations of the committee was that "To perform the various duties referred to in this report a special body should be constituted entitled the Railway & Canal Commission which should consist of not less than three members: they should be persons of high standing, one of whom should be an eminent lawyer and one should be thoroughly acquainted with the details and practice of railway management."

This recommendation was embodied in the Regulation of Railways Act, 1873 (the title of which by the Railway & Canal Traffic Act, 1888, is changed to the Railway & Canal Traffic Act, 1873).

By the Act of 1873 power was given to the Crown to appoint a tribunal under the title of the "Railway Commissioners" consisting of three members, one to be of experience in the law and one of experience in railway business, to whom was transferred the jurisdiction of the Court of Common Pleas under the Act of 1854, together with certain other duties in connection with railway and canal companies, including the enforcement of additional obligations imposed by the Act on these companies. The decisions of the Commissioners on questions of fact like those of the Court of Common Pleas under the Act of 1854 were to be final, but whenever they were of opinion that a case before them raised a question of law, they were in some cases directed and in others empowered to state a case for the opinion of a superior Court.

The Act also imposed on companies the duty of publishing their rates in books to be kept at stations, and power was given to the Commissioners on the application of any person interested in a particular rate to order a company to disintegrate it by distinguishing the charge for conveyance from the charge for terminal services. The Act also contains provisions as to through rates when demanded by a company and provisions requiring companies to distinguish terminals from mileage charges with power to the Commissioners to determine the question of the reasonableness of any terminal charge.

The Commissioners first appointed were Sir F. Peel, Mr. H. Macnamara (Barrister-at-law), and Mr. W. P. Price (Chairman of the Midland Railway Company), and, on the death of Mr. Macnamara in 1877, Mr. Miller, Q.C., was appointed to succeed him. The late Mr. J. H. Balfour Brown, K.C., (who with other well-known leaders of the Parliamentary Bar afterwards practised extensively before the Court) was for a time the Registrar of the Court. These Commissioners remained in office until the coming into force of the Railway & Canal Traffic Act, 1888, on January 1, 1889.

Another recommendation of the Committee of 1872 was that a new and uniform classification of goods was both desirable and practicable, but Parliament did not see its way to give effect to this recommendation in the Act of 1873, and after the passing of that Act friction arose between traders and the companies, mainly on account of the difficulty of obtaining information as to authorised rates owing to imperfect classifications and multiplicity of private Acts. In 1881, a Select Committee of the House of Commons was appointed to inquire into the working of the Act of 1873 and also into the general relations between traders and the companies, and this led to the passing of the Railway & Canal Traffic Act, 1888, under which the requirement was made for the revision by all railway companies of their maximum rates, and each company was in the final instance to prepare a revised classification of goods and a revised schedule of maximum rates and submit them to the Board of Trade.

That Act also dissolved the Railway Commissioners appointed under the Act of 1873, and constituted the present Railway & Canal Commission, consisting of two "Appointed"

Commissioners, one of experience in railway business, and three *ex-officio* Commissioners being judges of the superior courts for England, Scotland, and Ireland, and there was transferred to the Commission all the jurisdiction of the former Commissioners under the Act of 1873, and the Commission was given an extended jurisdiction including (*inter alia*) power to decide any question involving the legality of any charge sought to be made by a company as to merchandise traffic, and to enforce payment thereof. This jurisdiction was further extended by several Acts passed after 1888.

For many years after 1888 the Railway & Canal Commission was an important and very busy Court, and the *ex-officio* members have included many eminent jurists, and among the "appointed" members such names appear as the Hon. A. E. Gathorne Hardy, Sir James Woodhouse (afterwards Baron Terrington), and E. Tindal Atkinson, K.C. The Counsel who practised extensively in the Court include Pope, Q.C., Bidder, Q.C., J. H. Balfour Brown, K.C., and C. A. Cripps, K.C. (afterwards Lord Parmoor).

The effect of the Railways Act, 1921, however, was not only to lessen the number of cases normally coming before the Court, but to limit considerably the jurisdiction of the Commission under the Act of 1888, in that, jurisdiction in all matters relating to rates and charges was transferred to the Railway Rates Tribunal, and practically in matters affecting the carriage of merchandise the only jurisdiction which remained for the Railway & Canal Commission was in relation to questions of facilities and undue preference. In other words, the Commission was relegated to the limited jurisdiction (with certain variations) of the former Railway Commissioners under the Act of 1873.

Now, by the Transport Act, 1947, this limited jurisdiction, and, in fact, all jurisdiction under numerous enactments relating to railways and canals, is transferred to the Railway Rates Tribunal (the name of which by that Act is changed to the Transport Tribunal) to which is also transferred the jurisdiction of the Appeal Tribunal constituted under the Road & Rail Traffic Act, 1933. The members of the Transport Tribunal are whole-time officers, and on this tribunal will now devolve to a great extent the arduous and important duty of effecting a proper co-ordination of road and rail transport, and in this connection none will deny that the increased and exclusive jurisdiction of the tribunal is the logical sequence of recent legislation.

Nationalisation of Buses

WIDESPREAD uncertainty still exists concerning the nationalisation position under the Transport Act, 1947, in relation to the bus industry outside the London area. The position is dealt with quite briefly in Part IV of the Act, which gives the British Transport Commission permissive, but not compulsory, powers, and provides no authority for the compulsory acquisition of any particular undertaking, or the shares therein. It probably is no overstatement to say that the Government got "cold feet" when drafting provisions for dealing with the provincial passenger road transport industry by reason of the widely divergent views in socialist circles about what constitutes public ownership of a localised public service. Between 40 and 50 years ago, it may be recalled, the great conflict was between municipal and private trading, and the policy of municipalisation (aided by the "scrap iron" provisions of the Tramways Act, 1870) achieved a large measure of success with urban passenger transport. As a result, a great many bus systems of the large provincial towns are in the hands of the municipalities, and many of them make satisfactory profits for the relief of the rates. Thus, many supporters of socialist views feel that public ownership has already been achieved in a satisfactory way, and are far from giving their support to any measure of centralisation which will divert both local profits and the control of undertakings from local interests.

Under Part IV of the Act, the British Transport Commission is authorised to prepare and submit to the Minister of Transport at any time area schemes for co-ordinating passenger road transport after consulting the local authorities concerned and considering what they have to say. The Minister is also empowered to specify areas and direct the Commission to pre-

pare schemes for them. The schemes may specify who is to provide passenger road transport services within the area, may transfer existing undertakings to the persons or bodies specified, and may provide for pooling of receipts. This is the only compulsory way of acquiring road passenger services. The issue is complicated by the fact that the Commission inherited from the main-line railway companies on its formation substantial (but in no case controlling) shareholding interests in many of the large provincial bus companies, and also partnership arrangements with a number of municipal transport undertakings, both directly (in four cases in Yorkshire) and indirectly through the railway-associated bus companies in many other parts of the country.

The B.T.C. shareholdings in large provincial bus companies have been strengthened materially by the acquisition of the Tilling group holdings, which in some cases give the Commission the whole ownership of the share capital of a company, and in other cases give it a controlling interest, but leave outstanding substantial minority shareholdings in connection with which there are no compulsory powers of purchase. In addition, the B.T.C. has taken over the entire shareholdings in three companies in the Mansfield and Nottingham area, which were acquired by the British Electricity Authority. In Scotland, the group headed by the Scottish Motor Traction Co. Ltd. has been in touch for many months with the B.T.C. The S.M.T. group is unusual in being headed by a company which is both the parent company and is also a substantial bus operator. The current position of B.T.C. shareholdings is shown in the table which we reproduce on Page 25. The accompanying folding plate shows the approximate areas served by the principal provincial bus companies in Great Britain.

The B.T.C. is empowered by Section 2 of the Act to carry goods and passengers by road within Great Britain, and thus may operate buses anywhere, subject to route and vehicle approval, but without the necessity for obtaining road service licences, in competition with existing operators, and, therefore, without compensation to them unless they are actually transferred compulsorily under an area scheme.

When we discussed the B.T.C. powers and their delegation in our issue of September 10 last, we pointed out that this power in practice is presumably subject to rather severe limitations outside the London area, by reason of the co-ordination and working agreements entered into with many provincial bus companies by the former main-line railway companies. As Section 14 of the Act made the Commission subject to all the liabilities of the railway companies as well as transferring all the rights, the Commission and its agents are thus restricted as to their bus operations in a large part of the country. Recently, the Tilling deal has altered the position as, where the B.T.C. owns or controls both parties to an agreement, it is in a position to cancel that agreement or modify its terms.

No definite pronouncement has been made by the British Transport Commission as to how it proposes to exercise its permissive powers in regard to the preparation of area schemes, but it decided that consideration should be given to the formulation of a scheme for the Northern Area, and Major-General G. N. Russell, Chairman of the Road Transport Executive, met in Newcastle on December 21 representatives of 13 local authorities for a preliminary conversation, as we recorded briefly last week. At this meeting, he gave the impression that the nationalisation of buses in area schemes covering the whole country had been adopted as a general principle.

He said that Great Britain had been divided provisionally into 12 areas, and that it had been decided to consider the Northern Area first. He envisaged that ownership of passenger undertakings in the area would pass to the B.T.C. under the terms of compensation provided for in the Act, and that an Area Board would be set up for the purposes of administration and operation. The area would be divided into districts, and machinery would be provided (in addition to that contained in the Act) for "full and effective consultation with users." He said it was hoped that, if all the road passenger services were brought together under one authority, it would be possible "to abolish many of the petty restrictions that at present inconvenienced the public, and to ensure that the resources of the area as a whole were better deployed to the advantage of the public." General Russell said that these were only tentative conclusions to which the B.T.C. was not com-

mitted, but it was clearly the impression of those participating in the conference that the maximum they could hope to achieve would be a modification of detail.

It is noteworthy that the scheme received a very cold reception both from the municipal representatives participating, and also from an active and vocal section of the travelling public. No municipal representative supported the scheme, and the Town Clerk of West Hartlepool said that he had a definite mandate from his council to say that it did not wish to have anything to do with a scheme to take away from West Hartlepool the ownership and control of its own transport services.

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Standardisation of Rolling Stock

ONE of the arguments which is advanced most frequently in favour of nationalisation is the benefit which may be expected to accrue from standardisation. In the railway service the process of standardisation has been in being for many years and especially since the grouping of the railways into the four main-line undertakings in 1923. From then until 1945, for example, the L.M.S.R. reduced its locomotive stock from 10,316 to 8,049 units and also reduced the number of classes from 400 to 133. Nevertheless, although the other main-line railways also had made progress in rolling stock standardisation, there is still a wide diversity of types which have been inherited by the Railway Executive. This has arisen in part from the fact that the former companies were subject to the long-standing custom by which each new Chief Mechanical Engineer initiated fresh standards of his own. A notable exception to this was the Great Western Railway, which for a period of over 40 years followed a single standardisation scheme for its locomotives under successive Chief Mechanical Engineers.

When, just over a year ago, British railways were nationalised, the Railway Executive decided that one of its first tasks should be the highest practicable degree of standardisation throughout its rolling stock. Obviously, this must be a long-term policy, partly because of the long life of the units, but Mr. R. A. Riddles, Railway Executive Member responsible for mechanical engineering, as is shown on page 23, has given some account of the steps which have been taken, and the progress which has been made. In future, the number of locomotive classes on British Railways is likely to be restricted to 12, although that day cannot be yet. The first two standard examples of steam locomotive classes may be in production in 1951. These two are intended for fast passenger work and mixed-traffic duties. Attention will be concentrated on producing as simple a locomotive as possible so as to reduce shed maintenance. Maximum availability and a good general level of performance will be sought, rather than concentrating on the search for higher thermal efficiency. Similarly, it is now known that the intention of the Railway Executive is to raise the average speed of all trains rather than to run a few high-speed trains to the detriment of other railway users.

Some 37 committees have been set up to study the shopping of locomotives and such like topics, all with the ultimate aim of deciding the best way of getting the most out of the engines. A standard system of shopping of locomotives has been evolved and has just been put into effect. Classification of locomotive repairs and works organisation also are being studied by these committees, membership of which is drawn from each of the Regions. The drain on the staff resources in the Regions of manning these committees must be considerable; nor, in view of the impossibility of evolving fixed standards, can much relief be expected.

Apart from the scope for standardisation offered by the locomotive and its components, similar efforts are being made in the carriage and wagon works. It is understood that a decision has been taken that the standard coach of the future is to be of all-steel construction. Its lighter weight but ability to withstand greater buffing stress should make for economy and safety. One important matter which will fall to be decided before the first of the standard coaches is produced in 1951 will be whether buckeye or screw coupling should be adopted as standard. The principal disability suffered by the buckeye coupler is the weight involved, and efforts no doubt will be made to effect a reduction in this, which is directly reflected in operation costs.

LETTERS TO THE EDITOR

(The Editor is not responsible for the opinions of correspondents)

Leamington and Stratford Services

18, Milverton Terrace,
Leamington Spa, December 17

TO THE EDITOR OF THE RAILWAY GAZETTE

SIR,—Mr. R. E. Charlewood's letter under the heading "Shorter Trains and More of Them" in your December 17 issue, about the services to Stratford-on-Avon, draws fresh attention to a very bad gap in Western Region services.

Because of the lack of through services from Paddington, the ignominious spectacle of passengers handling their own heavy luggage at Leamington Spa is frequent at busy times. I myself have seen American visitors hauling their own baggage out of the guards' vans of trains from London, and staggering with it to the bay where the Stratford train waits.

This is no criticism of the Leamington Station staff. We have an excellent stationmaster and a willing lot of foremen and porters, but they are numerically not strong enough to "do everything" when the lengthy London trains come in.

I wonder myself if the Western Region authorities realise what a Mecca is Stratford for summer visitors, and, if they cannot provide new services, there is surely a strong case for a revival of the Marylebone route. This neglect is on a par with the Region's continued and inexplicable reluctance to put on a train from South Wales to Birmingham after 5.5 p.m. It is to be hoped that the Regions are putting in some hard thinking at the moment to improve the summer services. We might even get a London Midland Region train from Leamington Spa to Coventry between the hours of 12.40 p.m. and 4.0 p.m., which is the existing gap. The Saturday only train at 2.21 p.m. is nicely timed to be too late for the Coventry City and Coventry Rugby Union matches.

The amount of traffic that is lost all over the country through lack of common gumption must be enormous. Western Region lost six first-class fares from me in half as many months because of that premature Cardiff departure.

Yours faithfully,
GILBERT DALTON

"C" Licences

Felixstowe, December 20

TO THE EDITOR OF THE RAILWAY GAZETTE

SIR,—While general agreement would be found regarding most of the views expressed by Mr. Harold Elliott in his address given recently to the Debating Society, Western Region, British Railways, and reproduced in the December 17 issue of *The Railway Gazette*, an exception must be made in respect of his comments on "C" licences.

Surely the very fact that the belief in the greater profitability of privately-operated transport "is so common" is something of an indication that so far from being "a fallacy" the claim is one which is based on the long experience of a relatively large number of operators.

In considering the use of "C" licensed vehicles it is essential not only to take into account all appropriate costs, but also to have regard to credits, chief among which are (a) advertisement value, (b) the retention of goods by the trader until the time when they are signed for by the customer, and (c) the ability to lay on transport for a particular job at a moment's notice.

"The proof of the pudding is in the eating thereof," and it is significant to note that so very few of the traders operating under "C" licences have been persuaded to revert to other forms of transport.

Is it not clear that, being already convinced of the strength of the case for the use of private road transport, the traders generally are rapidly extending their fleets because they foresee sharply rising costs of public transport, particularly that of the R.T.E., whose operating ratio is bound to be worsened temporarily by reason of:—

- (i) The need to build up staff for general organisation and research
- (ii) Provision of new offices for divisional, district, and (in many cases) local and group establishments
- (iii) Construction of extra garage accommodation for new concentrations of vehicles
- (iv) Additional staff costs for drivers, attendants, etc., re-based on new groups or centres away from their homes
- (v) Additional costs to be incurred by proper adherence to statutory conditions relating to hours of duty, speed limits, etc.

Having conceded the economic case for privately-owned transport it is equally important to determine the factors which contribute to its success. Indeed, it is high time they were stated unequivocally. The main factor is, of course, selectivity which consists of ensuring that in the main bulk loads are reserved for the "C" vehicles. This obviously can be done

only where there is available public transport operating on a "common carrier" basis throughout the country and prepared to accept the numerous small consignments sent by the trader to points off the beaten track and in the remote areas.

Loads of empties are not at all profitable, and if on return journeys vehicles can convey inward bulk loads of raw materials they do so, and the empties are tendered to public transport, usually successfully.

Deprived of the best paying loads and compelled to take costly "smalls" and "empties," the return on capital and revenue expenditure of public transport is reduced and charges must be adjusted correspondingly. Thus a better comparison must ever exist in favour of the "C" licensee.

Is it not right therefore that before committing himself deeply to the operation of "C" licensed vehicles the trader should consider: who will carry the small consignments? who will carry the empties? who will carry the coal? remembering that so long as transport as a whole is publicly-owned he will still as a taxpayer be called on to share in the losses of the State undertaking, whose carryings he has seriously depleted.

Yours faithfully,
W. F. H.

Railway Officers' Correspondence with the Press

The Railway Executive,
222, Marylebone Road,
London, N.W.1, December 31

TO THE EDITOR OF THE RAILWAY GAZETTE

SIR,—With reference to the letter signed by "Wife of a Technical Assistant" which was published in your issue of December 10, under the heading of "Railway Engineers' Salaries," in which she mentions instructions that "all communications to the press from members of the staff must be forwarded through the head of the department, who will submit them to the Chief Regional Officer," the position is by no means as described by the writer.

There is no embargo whatever imposed by British Railways on members of the staff writing to the press in regard to staff conditions and remuneration, but an instruction has been issued that where members of the staff write to the press on matters of this kind, they will not use official notepaper for the purpose. The object of such instruction is to avoid any misunderstanding on the part of recipients of such letters as to whether the letter has any official status.

The only other instruction which has been issued by the Railway Executive in regard to articles or contributions to the press is that, where such contributions incorporate any statistics, data, or designs not previously made public, or which might be construed as an official expression of the policy of the Railway Executive, such articles must not be offered for publication without first being submitted for approval through the normal official channels.

Yours faithfully,
D. S. M. BARRIE,
Public Relations Officer

Continuous Brakes on Freight Trains

Eritrean Railways & Ropeway,
General Manager's Office, P.O. Box 218,
Asmara, Eritrea

TO THE EDITOR OF THE RAILWAY GAZETTE

SIR,—Having been absent on home leave, I am only just catching up on my reading of *The Railway Gazette*, and have been most interested in the correspondence on the subject of Continuous Brakes on Freight Trains. I am surprised to find it assumed, and by one correspondent definitely stated, that the continuous brake cannot be combined with the three-link loose coupling.

On the San Paulo (Brazilian) Railway all goods stock used to be fitted with vacuum brake and three-link coupling. Side handbrake levers were also provided. If I remember rightly, trains of up to 900 tons were hauled by the 2-8-4 side tank engines, and I can recollect no trouble with the brake due to the loose couplings, though I travelled many thousands of miles on the footplate as a locomotive inspector. I am speaking of some twenty years ago.

Yours faithfully,
O. P. C. COLLIER, MAJOR, R.E.,
General Manager &
Chief Mechanical Engineer

PARCELS BY PASSENGER TRAIN.—The Ministry of Transport Order limiting the weight of packages to be accepted for conveyance by passenger train to 1 cwt., which has been in operation since 1942, has been revoked.

The Scrap Heap

CHRISTMAS ENQUIRIES AT EUSTON

Christmas and New Year train enquiries by telephone to the "At Your Service" bureau at Euston totalled more than 50,000 in ten days. At peak hours, enquiries exceeded 400 an hour. The four girls on duty on Christmas Day answered 1,450 enquiries and ate their Christmas dinners at the telephones.

* * *

RECORD MAILS AT PLYMOUTH

During 1948, 355,365 bags of ocean parcel and letter mail were handled at Millbay Docks, Plymouth. This was the largest amount ever dealt with by the Port in a year and more than three times the quantity handled in 1947. One hundred and nine ocean-going passenger and mail liners and ten Continental passenger vessels called at the Port during the year and 5,760 passengers with their baggage passed through—a post-war record.

* * *

"AN ANGRY PASSENGER" PLACATED

A latecomer from the Highlands writes to tell me in answer to my recent complaint [quoted in *The Railway Gazette* of December 24] of the state of the luggage vans on the Inverness-Euston evening mail train, that all the necessary reforms have been made. The dining car is put on next to the sleepers, separate vans are reserved for passengers' luggage, and for kippers, venison, dogs, etc., and there are now plenty of porters at Euston.

I wish I could think that my words worked the oracle. I don't; but in the interests of justice I put these facts on record.—*"The Old Stager"* in *"The Sphere."*



"I wonder if you could tell me what time we are due to enter the Severn Tunnel?"

[Reproduced by permission of the proprietors of "Punch"]

ORIGIN OF NORTH WESTERN BLACK

The late William Cawkwell, a former General Manager of the London & North Western Railway, was one of the most autocratic railway officers ever known. It is stated that he was fond of saying that he did not want departmental officers who could not act on their own initiative, but submitted matters to his decision. . . .

The legend goes that one day Mr. Cawkwell sent for the locomotive engineer and said: "I like all my head officers to personally decide matters relating to their department. Now, as Locomotive Superintendent, you have to decide what colour the engines are painted. It's a matter I don't want to be troubled about, so, as long as it's black, I do not mind what colour you choose for them."—From *"The Railway Magazine"* of May, 1907.

* * *

PROGRESS

. . . The example set was speedily followed by the projection of the London & Birmingham Railway, which had to traverse a distance of a hundred and ten miles, to bore through hills, to span wide valleys, and to cross rivers—for all of which the necessary capital and talent were found, and the work completed in due time, at the expense of seven and a quarter millions. Next came the design of uniting London with Bristol; and the Great Western line was planned and accomplished by Brunel, on a scale of magnificence and expense hitherto unheard of. This was followed by the completion of the line from London to Southampton; which latter place has become, since its connection by railway with London, the third port of the kingdom, and the principal point of departure for the ports of the Mediterranean and the East. Simultaneously with

the above important undertakings were commenced others of a similar nature; and as year after year passed away, that vast reticulation of railways which now overspreads the whole face of the land like a net, came gradually into being. Their construction gave birth to a new class of officials, of working labourers, and of manufactured material, and at the same time tended more to modify the manners and customs of Englishmen than any other event of modern times. The facilities of intercourse have multiplied the amount of travelling nearly a hundred-fold within the last thirty years, and the result has been a general diffusion of that species of information and knowledge of the world which travelling universally imparts. Old prejudices have been swept away, a liberal and cosmopolitan spirit has to a large extent displaced the old local jealousies—freedom of intermixture has broken down the ancient bigotries, and the way is left clear for the march of improvement. — From *"Old England,"* published by James Sangster & Co., about 1855.

100 YEARS AGO

• The Railway Times.

SATURDAY, JANUARY 6, 1849.

THE year 1848 has been a memorable era in nearly every phase of human existence. Battle, murder, and sudden death have assailed mankind, not in succession, but at once; and convulsions of property, wide and ruinous, have added to the total of human calamity which marked its eventful course. It was not to be expected that a new and as yet hardly rooted interest, like that of railways, should withstand storms from without and disorders from within, amid the general confusion. And, consequently, we find that the credit of the great system of locomotive commerce has been shaken to its foundation. But there is an ever-springing source of hope in the human breast; and matters have no sooner reached their worst, than hope awakens in all its force to re-assure the courage of the discomfited. Thus, no sooner had the ostensible values of railway property sunk down to a frightful ebb, than a favourable change ensued, and brought back the tide with renewed force. It is our earnest hope that this may continue: that the year, which has begun with so favourable an aspect, may fulfil all its golden promises (not only in California), and that no potato-blight, domestic chartism, or foreign revolutions will cast on it their exhausting and depressing influences.

Above all, we hope that by an open and candid exposition of affairs, the Directing bodies will avoid giving occasion to those depreciating attacks upon railway property which the last year witnessed ravaging the investments of astounded shareholders. That, so long as stock and share-jobbing exists, we must hold ourselves fully prepared for all the mischief which wholesale and reckless lying can call into action, it is unnecessary here to proclaim; but we must have expressed, in authoritative terms, the only effective answer of which these mendacities are capable, i.e., the truth, the whole truth, and nothing but the truth. Be the motto of Railway Directors for the year 1849 (and for ever), VERITAS VINCI!

DOUBLE TROUBLE

Passenger: "I'm extremely sorry, but I've lost my ticket and I haven't any money to pay for another."

Rail ticket inspector: "Where are you going?"

Passenger names station.

Inspector: "Well, add this to your grief; the train doesn't stop there."—From the *"Newcastle Journal."*

Tailpiece

RUSH HOUR

Passenger profusion
(Pardon the allusion)
Stimulates confusion.

Sacrifice illusion—
Hope of sweet seclusion
Snare and a delusion.

Indiscreet intrusion—
Violent exclusion—
Physical contusion.

Ultimate conclusion?
Inculcate collusion—
Organise diffusion.

A.B.

OVERSEAS RAILWAY AFFAIRS

(From our correspondents)

SOUTH AFRICA

Wagon Shortage and Coal Transport

The measures taken by the Railway Administration to increase its rolling stock resources are gradually producing results, though not as quickly as requirements demand. In 1938, there were 27,629 small wagons and 18,516 bogies; the corresponding numbers on October 1, 1948, were 32,279 and 30,961 respectively.

At present, 20,700 bogies and 1,700 shorts are on order, and more than 7,000 bogies are due to be delivered before the end of March. Shortages of steel are holding up production and delays of from eight to twelve months in delivery cannot be avoided by the manufacturers.

A more satisfactory feature is the rate of wagon production attained by a private firm in the Union. This firm has already delivered 3,500 wagons.

The report of the South African Coal Commission, with special reference to the railway haulage of coal, was summarised in our December 24 issue. As relief during critical periods, the diversion of coal traffic from the railways to ocean transport has been resorted to, to enable the Administration to use wagons for the heavy demands imposed by commerce and agriculture. The rail route to the Cape from the coal mines in the Transvaal necessitates a long haul of about 1,100 miles, and the truck turnover amounts to about 14 days, including loading and discharging.

A saving of more than a week in truck turnover can be accomplished by sending coal from the Witbank area to Lourenço Marques and thence by sea to Cape Town. The use of ocean transport for coal is enabling the railways to cope more effectively with other kinds of traffic by the release of wagons for the transport demands of commerce, industry, and agriculture, but it is only an expedient while the high level of imports and exports and general traffic increases make relief measures advisable.

A considerable tonnage of coal was conveyed by sea during 1947 and in the beginning of 1948, before any estimate became available for 1948 of the maize yield for the transport of which a large number of wagons is required every winter.

INDIA

More Pay for Running Staff

Running staff will receive more pay and allowances as a result of the Railway Board having accepted the recommendations of the Running Staff Pay & Allowances Committee, which was set up to continue investigations initiated by the Central Pay Commission. Whereas the emoluments for drivers in the lower grade ranged approximately from Rs. 65 to Rs. 204, they will range under the orders now issued from Rs. 200 to Rs. 250. The minimum emoluments in the highest grade amounted to Rs. 360; they will be now about Rs. 440. Apart from a general lift in the total emoluments, the Government is trying to bridge the gap between pay and allowances on various railways as much as possible, commensurate with the varying intensities of traffic and operating conditions.

The decisions of the Government have been strongly criticised by the All-India Railwaymen's Federation on the grounds,

among others, "that 8,000 railwaymen, like travelling van checkers, van porters and ticket examiners, classified as running staff under the Hours of Employment Regulations, have been treated as being outside the scope of the Running Staff Pay & Allowances Committee." The Government has replied that according to statutory rules, only staff in charge of moving trains is eligible for running allowances. This covers drivers, shunters, firemen, "augwallas," guards, and brakemen. Another reason for protest by the Federation, that the minimum scales of skilled workers continue to be violated in respect of locomotive running staff, has been answered by the Government with the argument that the task of firemen, to whom the Federation presumably refers, could hardly be considered equivalent to that of an artisan. On stationary boilers, a fireman will continue to receive an unskilled labourer's pay, namely, Rs. 30 to Rs. 35. The granting of higher scales of basic pay, together with running allowances, is therefore, a measure of special consideration to firemen of locomotives.

NEW SOUTH WALES

Report for 1947-48

The report for the year ended June 30, 1948, by Mr. T. J. Hartigan, C.M.G., former Commissioner for Railways, has been presented to the Minister for Transport.

Coal shortages greatly handicapped the Department in carrying out its activities. To conserve coal it was necessary to maintain some train service restrictions throughout the entire year and to impose severe reductions in services on three occasions, in January, May, and June, 1948.

The earnings for the year were £36,905,862, an increase of £6,553,152 on the amount for the previous year. The increased earnings were derived from goods traffic (£4,451,397), coaching traffic (£1,425,221), electricity sales (£547,377), miscellaneous items such as rents and advertising (£53,045), refreshment rooms (£49,475), and livestock traffic (£26,637). The principal factor contributing to the increases was the rise in charges for railway services made in August, 1947. Another factor, however, was the larger volume of traffic handled.

Concessions amounting to £594,024 were allowed, £320,552 in reduced charges for the transport of livestock and fodder, £269,518 in rebates of freight allowed to consignees of flour, coal, limestone, crude ores, cement, wire rods, and other goods, and £3,954 on account of passes issued to blind soldiers and their guides.

Working expenses increased from £25,885,577 to £31,014,667, an increase of £5,129,090. This increase is explained by the introduction of the 40-hr. week, adjustments in the basic wage and awards, higher material costs, and other miscellaneous increases outside the control of the Administration.

After payment of all statutory debits, such as interest on loan capital and sinking fund contributions, the financial figures for the year showed a surplus of £111,585.

Passenger journeys totalled 263,046,815, an increase of 1,402,609 on the number for the previous year. Goods traffic increased from 16,539,080 tons to 17,407,149, an increase of 868,069 tons.

Features of freight traffic included the hauling of 55,920,241 bushels of wheat, 1,006,593 bales of wool, and 154,236 loaded livestock wagons, and the handling of 3,948,540 tons of goods at Darling Harbour terminal.

New rolling stock placed in service during the year included eight express passenger locomotives built in the railway workshops, and eight air-conditioned coaches, 17 refrigerator vans, 28 cattle wagons, and 45 sheep vans delivered by local contractors.

Large railway works in hand included the construction of the Circular Quay section of the Sydney City Railway, and that of the cross-country line between Sandy Hollow and Mary Vale, and the quadruplication of lines between Lidcombe and Penrith and between Strathfield and Hornsby. In addition, work was carried out on the duplication of the line between Kingsgrove and Herne Bay and on the construction of two additional lines between Redfern and Tempe, and preliminary work was performed on the electric railways to serve the eastern, south-eastern, and southern suburbs of Sydney.

As a result of additions and improvements to railway plant and equipment, the capital invested in the Department's assets increased by £8,608,330 to £165,839,014. The value of stores purchased was £12,644,336. Of this amount £3,078,800 were spent on coal, £1,263,504 on iron and steel products, and £1,170,986 on timber.

The average number of staff employed during the year was 58,450, including 105 serving with the defence forces.

ITALY

Expanding Passenger Traffic

The passenger traffic on State Railways has been increasing at an unparalleled rate in recent months, the Italian Minister of Transport declared recently when on an inspection tour in Tuscany. He said that the present coaching stock was hardly sufficient to cope with the increasing demand, and the repair shops of the State Railways and those of private industry were working to capacity to complete repairs and to build new coaches. New and repaired coaches placed in service in northern Italy recently numbered 800.

It is not known whether this expansion is because the public wishes to forestall as much as possible the impending higher fares which have been decided on, nor is it known whether the new fares will check the traffic. According to an answer recently given in Parliament by the Under-Secretary for Transport, the impending increase in the fares is still considered inadequate, and railway fares in Italy will still be lower than in most other European countries. At present, passenger fares are eleven times their pre-war level, and the goods rates are 17 times higher.

SWITZERLAND

Station and Line Improvements

Improvement of stations and lines generally, at fr.22,492,400 (fr.13,170,095 in 1947) is the third largest item in the 1949 budget. Modifications, modernisations, and extensions at many stations have become unavoidable in a number of cases because of the considerable increase in the traffic and train services. The industrial revival in Switzerland resulting from the wartime destruction of industries in other countries necessitated the laying of 57 new private sidings between 1945 and 1947, hence the need to improve existing service installa-

tions in the stations and add new ones, such as signal boxes and signal installations and electric installations. Improvements on open lines are to absorb fr.5,886,900 in 1949 (fr.3,478,394 in 1947), of which fr.1,800,000 will account for the extension of the block system. An expenditure of fr.354,000 has been earmarked for renewal of the overhead wire system.

FRANCE

Metro Restores First Class

The Paris Metropolitan on December 17 restored the first class. The flat fare is 15 fr., and a book of five tickets, each valid for two journeys, costs 150 fr. Passengers with second class tickets may travel in first class coaches before 8 a.m., but after that time must pay a fine of 50 fr. to the ticket inspector. When the

Metro flat fare was raised recently from 5 to 10 fr., it was announced that the first class would be reinstated at 15 fr., as soon as renovation of the former first class coaches could be completed.

GERMANY

Black Forest Main Line to Remain Single Track

Financial difficulties are reported to be responsible for the sudden discontinuance of the restoration of the second track on the Offenburg-Freiburg section (39 miles) of the Karlsruhe-Basel main line, of which mention was made in our November 12, 1948, issue. The relaying of the second track (which had been removed in 1945, after the German collapse) was already partly under way between Offenburg and Denzlingen. The re-doubling had been decided on jointly by France as the occupy-

ing power concerned, and by the countries interested in developing the transit traffic over that route—Belgium, the Netherlands, Scandinavia, and Switzerland. Completion of the work had been envisaged for the end of 1949. The same reasons are given for the discontinuance in November last of the work of reconstruction of station buildings at Offenburg, Baden Oos, and Rastatt, and the replacement by permanent bridges of temporary structures on the Singen-Säckingen-Basel main line.

U.S.S.R.

Electrification in Southern Russia

In the coal mining region of southern Russia electric traction was introduced in the middle of November on the line between Dolgintzevo (north-east of Odessa) and Nikopol, 74½ miles. The electrification is to be extended from Nikopol (on the Dnieper river) to Zaporozhe.

Publications Received

Railway Wagon and Tank Construction and Repair. By F. Ogden. London: Sir Isaac Pitman & Sons Ltd., 39/41, Parker Street, Kingsway, W.C.2. 8½ in. x 5½ in. 174 pp. Illustrated. Price 18s. net.—The railway wagon building industry really became a specialised trade after the 1887 Specification (superseded in 1923) of the Railway Clearing House which laid down that all new mineral wagons had to be equipped with spring buffers and elastic drawgear. The author brings to his subject the authority of a lifetime in this industry and has treated its complexities in a concise manner which makes his book of value not only as a manual for craftsman and apprentice but as a reference work also. Principles of construction and methods of repair are described in detail, with the aid of many clear line drawings. Separate chapters describe tank wagons, steel wagon building, and wheels and bearings.

Electric and Diesel-Electric Locomotives. By D. W. Hinde and M. Hinde. London: Macmillan & Co. Ltd., St. Martin's Street, W.C.2. 8½ in. x 5½ in. x 1 in. 366 pp. Illustrated. Price 36s.—Most of the standard works of reference on electric traction date from well before the war, so that not only do they leave an important period of locomotive development untouched, but the technique of using diesel power with electrical transmission receives only the barest of references. In this book the authors have set out to fill a gap often regretted hitherto by students of railways. With so wide a field to cover, they have wisely refrained from allotting chapters to electrical technology, but devote themselves in the main to a review of modern practice. It is assumed that readers will know why the series traction motor possesses the characteristics it does, and what are the differences in method between d.c. and a.c. control systems. What they will find here, on the other hand, is a description of all the main items of equipment required for electric and diesel-electric traction, and then abundant examples of their application in locomotives, both d.c. and a.c., drawn from all parts of the world.

The completeness of this survey is enhanced by 90 pages of tables giving both the electrical and mechanical features of characteristic locomotives, going back to 1925 for electric and to 1930 for diesel-electric types. Acknowledgment is made in this connection to the data compiled by the late Mr. C. E. Fairburn in 1937-38.

In this book the authors have performed the valuable service of extending such information right up to the year 1947, so that the salient features of locomotives such as the "3E" class of the South African Railways, which so far have received only brief notices in the British technical press, are made available. These tables alone would have been welcomed by all interested in electrical motive power, but they form only an appendix to profusely illustrated chapters describing many of the machines in more detail. In both parts of the book the authors have avoided the almost unadorned recital of dimensional particulars which sometimes passes for a description of an electric or diesel-electric locomotive, and emphasise features such as method of control, range of running speeds, type of transmission, motor ventilation system, and many others which are what the student really wants to know about. Several machines in both categories are the subject of folding plates, and there are numerous line drawings. Simplified circuit diagrams are given of control systems applicable to electric and diesel-electric traction.

Many of the photographs reproduced demonstrate that modern designers can clothe electrical or diesel-electric power with attractive lines, and in this respect the Eastern Region Bo-Bo for the Manchester-Sheffield route need not fear comparison even with the celebrated streamline "GG1" class locomotives of the Pennsylvania.

The Nationalised Industries: A Statutory Analysis. By D. N. Chester. Published by the Institute of Public Administration, 18, Ashley Place, London, S.W.1. 47 pp. 8½ in. x 5½ in. Price 2s. 6d.—The author of this booklet, who is a Fellow of Nuffield College, Oxford, analyses the provisions of the Acts of Parliament under which certain industries, including transport, coal, and electricity, have been nationalised. He points out that the Boards, Authorities, and Commissions set up since 1945 have less financial independence than those established before 1939, and that there has been a considerable increase in the powers of a Minister to control and to interfere. There is no instance among the pre-1939 corporations, such as the Central Electricity Board and the Port of London Authority, of a Minister having the power to issue general directions.

Mr. Chester is of the opinion that the Gas Bill (1948) is the best devised of the nationalisation measures so far enacted in that each Area Gas Board must aim at balancing its own revenue account,

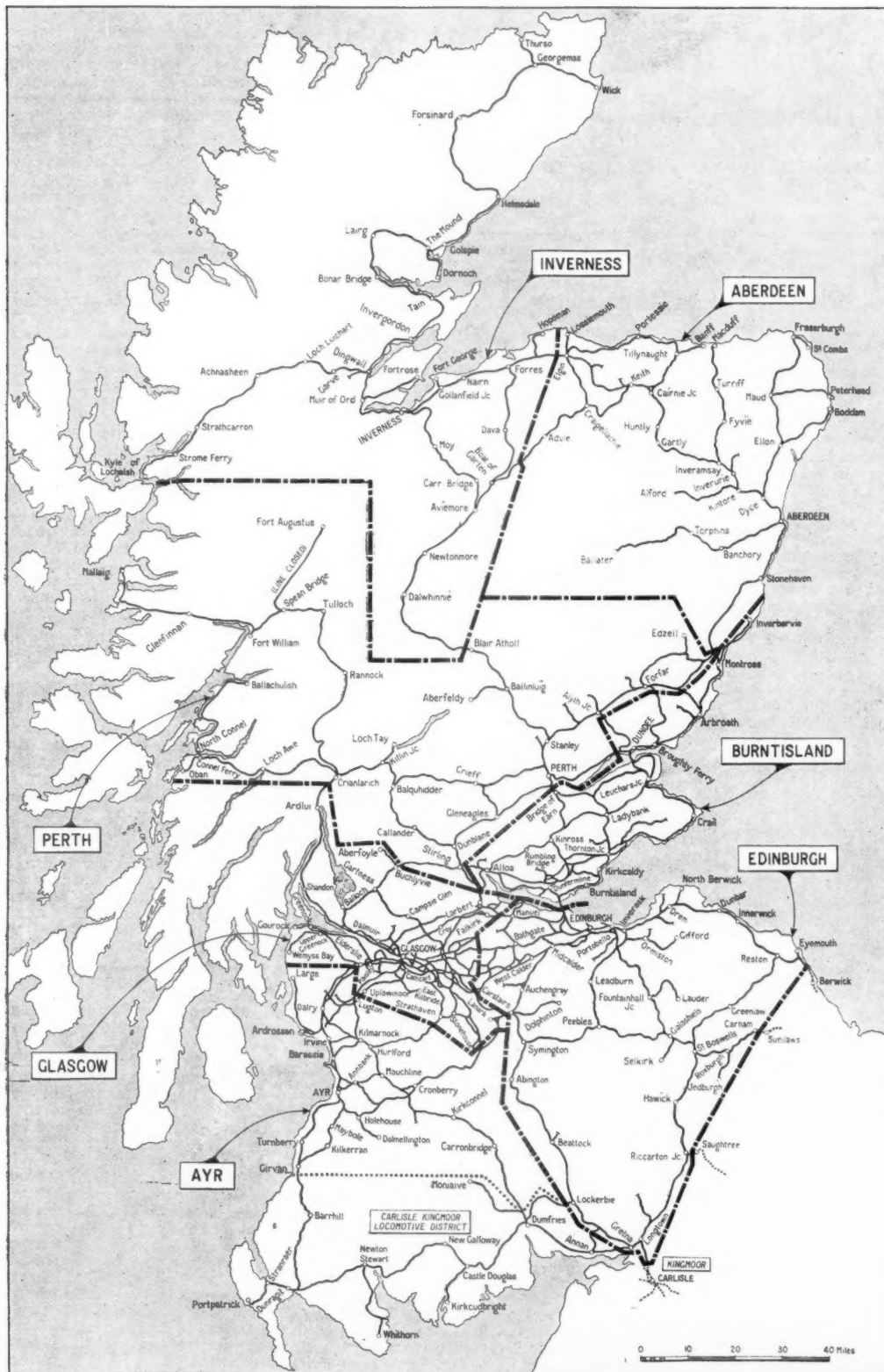
whereas in the case of both transport and electricity the revenue accounts of the Executives and Area Boards are merged in the undertaking as a whole. The Gas Act, unlike those nationalising transport, coal, and electricity, also gives statutory recognition to the need for consultation with other nationalised industries.

Eighty Years of Machine Tool Manufacture.—A well produced catalogue, entitled "Archdale Machine Tools, 1868-1898," has been issued by James Archdale & Co. Ltd., of Birmingham and Worcester. Beginning with a short history of the firm, which was founded in Lozells Street, Birmingham, 80 years ago by James Archdale, then only 29, the book has 75 illustrations of every type of tool from cartridge heading machines to multiple-spindle drills and hydraulic-feed milling machines.

Business Visitors to Chile.—A recent addition to the "Hints to Business Men" booklets published by the Export Promotion Department of the Board of Trade deals with business visits to Chile. Information is given on general travel and economic matters, and on import licences, customs, and general business procedure. A list of books that may be of interest to business men visiting Chile is given in an appendix. Readers are informed that on reaching their destination overseas, they will find that the local representative of the Export Promotion Department will be in a position to furnish them with introductions, to advise on local conditions, and generally to help them in achieving the purpose of their visit.

Modern Dust Collection and Fume Removal.—Standards set by specifications and factory, health, and purity regulations compel the industrialist's attention to dust collection and atmospheric purity in the factory. He may be agreeably surprised to discover, as the Visco Engineering Co. Ltd. points out in a new edition of this booklet, that dust collection frequently yields a profit, as the dust may be of value to him or to someone else as a by-product. The variety of products manufacture of which raises dust is very wide, even including so wet an article as beer, judging by a picture of an installation in a brewery. Dust collectors have also been found of value in metal casting shops, collieries, cement works, and in steel works where grinding, buffing, or polishing is necessary. The section on fume removal, which is a new addition to the booklet, illustrates fume extraction plants fitted to furnaces and at battery, chemical, and aluminium works.

Reorganisation in Scottish Region, British Railways



British Railways Scottish Region Map

Reorganisation in Scottish Region, British Railways

Fewer district centres and closer contact with the public and between departments

THE Railway Executive is giving immediate effect to a scheme for the reorganisation of the Operating, Motive Power, Commercial, and Civil Engineering Districts in the Scottish Region, the advantages of which will be to simplify the arrangements for commercial contact with the public and for domestic inter-departmental working. The present total of 37 centres, which are now the district headquarters of one or more of the departments concerned, will be reduced to 27. This is one of the first and one of the most important large-scale reorganisations arising from the unification of British Railways.

The new District Officers will be responsible to the Operating Superintendent, Commercial Superintendent, Motive Power Superintendent, and Civil Engineer, who in turn are responsible to the C.R.O., for the supervision of ex-L.M.S.R. and ex-L.N.E.R. lines and installations within each district, and in the interests of more efficient working generally the district boundaries of one department will, as far as possible, correspond with the district boundaries of other departments. Thus, the Commercial and Operating Districts will be strictly co-terminous, and Motive Power Districts also largely co-terminous with them.

So far as departmental requirements allow, the seven Civil Engineering Districts will also cover the same territory as the respective Commercial and Operating Districts, the principal difference being that the Glasgow Civil Engineering Districts will include two routes not embraced in the Glasgow "traffic" district, namely, the West Highland Line of the former L.N.E.R. and the former L.M.S.R. West Coast main line from Carstairs to Gretna Junction.

The West Highland line will be included in the Glasgow Northern Engineering District and the Glasgow (Central)—Gretna Junction main line in the Glasgow Southern Engineering District; for commercial and operating purposes the ex-Caledonian main line from Carstairs (inclusive) to Gretna will be in the Edinburgh Commercial and Operating Districts—a departure from tradition.

Signal & Telecommunications

A reorganisation is also being made of the signal & telecommunications arrangements in the Scottish Region. On the former L.M.S.R. in Scotland there were three centres (Perth, Glasgow, and Dumfries) for this work, while on the L.N.E.R. it was supervised directly by the five District Civil Engineers at Aberdeen, Thornton, Edinburgh, Glasgow, and Carlisle. The reorganisation provides for six signal & telecommunications areas compared with eight previously, the new locations being at Ladybank, Perth, Edinburgh, Glasgow (two offices), and Dumfries. Each of these areas will be under an Area Assistant.

While as far as possible the principle is being followed of administering the various functions from a common centre in each district, this ideal cannot immediately be achieved owing to the difficulty of office accommodation.

Under the new organisation the commercial and operating arrangements in Glasgow are the subject of special pro-

vision which will considerably simplify and strengthen British Railways contacts with the public. On the commercial side, the former L.M.S.R. dealt with commercial matters for the Glasgow District direct through the Commercial Manager (Scotland); similarly, on the operating side the detailed train working in the Glasgow District was directed from two control offices (St. Rollox and Polmadie) under the direct supervision of the L.M.S.R. Operating Manager for Scotland.

In the new organisation, Glasgow will have two District Commercial Officers (a District Goods Manager and a District Passenger Manager) for all British Railways interests, while one District Operating Officer will similarly take charge of all operating matters for the whole Glasgow area.

It will be noted that the separate Motherwell Districts of the former L.M.S.R. (controlled by a joint Operating & Commercial Officer and a District Locomotive Superintendent) will disappear as separate entities and be absorbed into other districts.

Similarly, in Edinburgh one District Operating and one District Commercial Officer replace the three District Officers previously maintained in the Scottish capital, the former L.M.S.R. having made Edinburgh the headquarters of a District (Joint) Commercial & Operating Officer.

The principle of joint Commercial &

Operating District supervision, which was a feature of the L.M.S.R. and L.N.E.R. Scottish organisations in the smaller districts, is preserved, but with a reduction in the total number of such districts from eight (seven former L.M.S.R. and one former L.N.E.R.) to four. The Commercial District based at Dundee and the Operating District based at Burntisland will continue.

Duplication of Districts

As regards the new Motive Power Organisation, the two instances in which Motive Power Districts require, for technical reasons, to be duplicated within existing Commercial & Operating Districts are in the Glasgow and Ayr districts. In the former case, this is due to the large number of depots and locomotives concerned within the Glasgow area, while in the case of the Ayr District, it has been necessary to establish a separate Motive Power District with headquarters at Carlisle (Kingmoor) covering the former L.M.S.R. lines between Carlisle and the South West of Scotland. This necessity arises primarily from the retention at Kingmoor (Carlisle) of a Scottish Region enclave, actually situated within the London Midland Region boundaries; the Kingmoor Motive Power Depot alone employs a staff of 1,275 and has an allocation of more than 200 locomotives.

The summary below shows (in the right-hand column) the location of the district offices for each department under the new organisation as compared with the previous arrangements. A list of the officers appointed by the Railway Executive to take charge of the various districts is given in our personal pages this week.

SCOTTISH REGION : DISTRICT ORGANISATION
Comparative statement of number of officers

	L.M.S.R.		L.N.E.R.		Total	New organisation	
	No.	Location	No.	Location		No.	Location
Operating ...	1*	Glasgow	3	Burntisland Edinburgh Glasgow	4	3	Burntisland Edinburgh Glasgow
Commercial ...	1*	Glasgow	3	Dundee Edinburgh Glasgow	4	4	Dundee Edinburgh Glasgow (Goods) Glasgow (Passenger)
Joint Operating & Commercial	7	Inverness Aberdeen Perth Edinburgh Motherwell Ayr Carlisle	1	Aberdeen	8	4	Inverness Aberdeen Perth Ayr
Motive Power ...	7	Inverness Perth Glasgow (St. Rollox) Glasgow (Polmadie) Glasgow (Corkerhill) Motherwell Carlisle	4	Aberdeen Burntisland Edinburgh Glasgow	11	9	Inverness Aberdeen Perth Burntisland Edinburgh Glasgow (2) Ayr Carlisle (Kingmoor)
Civil Engineering	5	Inverness Perth Edinburgh Glasgow Irvine	5	Aberdeen Thornton Edinburgh Glasgow Carlisle	10	7	Inverness Aberdeen Perth Edinburgh Glasgow (2) Irvine
Total ...	21		16		37	27	
Signalling & Telecommunications (Technical Assistants)	3	Perth Glasgow Dumfries	1		3	6	Ladybank‡ Perth Edinburgh Glasgow (2) Dumfries

* In Glasgow the district operating and commercial work was covered by the Operating and Commercial managers. The detailed train operating work was directed from two district control offices at St. Rollox and Polmadie (under the direct supervision of the Operating Manager).

† The signalling and telecommunications work was supervised directly by the L.N.E.R. District Engineers, and at headquarters it came within the jurisdiction of the Civil Engineer.

‡ Temporarily; will be moved to Aberdeen as soon as possible.

The Swindon "Castle" Class Locomotives

For over 20 years these engines have been the mainstay of all but the heaviest G.W.R. expresses

THE year 1948 was the Silver Jubilee of the famous "Castle" class four-cylinder 4-6-0 locomotives, the first of the series, No. 4073, *Caerphilly Castle*, having been completed at Swindon by the G.W.R. in 1923. This, therefore, was the first Great Western Railway express locomotive type to be introduced after the grouping scheme became effective on January 1 of that year. It is of interest to see that in 1948, the first year of the nationalised railways, the newly constituted Western Region continued to construct further engines of this type, which is among the most successful designs ever to run in this country. At the moment, there are 151 "Castle" class locomotives, of which 145 were built as such, the other half-dozen having been brought into the class by rebuilding.

These engines have been the mainstay of all but the very heaviest G.W.R. expresses for over twenty years, and are able to work over nearly all the main lines. Their exploits, whether on the gruelling Plymouth-Penzance run, or in their spectacular achievements on the

"Cheltenham Flyer," have won for them imperishable fame.

In the course of their long and brilliant service but little change has been made to the engines, and there are few modifications to observe in the latest examples of the class. The chief difference, however, is in the provision of a larger superheater within an otherwise unchanged boiler. The earlier, or "5013" class engines, carry a two-row superheater consisting of fourteen units, each of which comprises three flow and three return tubes 1 in. outside dia. increased to 1½ in. at the bends near the firebox end of the flues.

The "5098" class, however, carry a three-row superheater, which consists of twenty-one units, each comprising two flow and two return tubes, 1½ in. outside dia. joined at the firebox end of the flues by torpedo bends designed to resist the action of the fire. The superheating surface in the later engines is 295 sq. ft., as compared with 263 sq. ft. in the earlier design. A shorter chimney, nearly as short as that of the "King" class, is

provided; the top now being 13 ft. 2½ in. above rail level, that is, 3 in. lower than in the earlier "Castles." A straight-sided tender, resembling the type built for the "1000" class, but with a coal capacity 1 ton less, is attached. The official weight of the locomotive in working order is 79 tons 17 cwt., and is identical with the earlier engines. The new tender weighs 47 tons 6 cwt., as compared with 46 tons 14 cwt. of the previous standard type.

The most recently constructed "Castle" type 4-6-0 locomotive, No. 7017, *G. J. Churchward* (which is illustrated on page 13), is one of several engines of the class experimentally fitted with a mechanical lubricator instead of the hydrostatic type of lubricator normally used by the Western Region. A Silvertown thirteen feed mechanical lubricator feeds oil to the barrel and the two valve bushes of each cylinder and also to the regulator, the lubricator being driven from the right-hand valve gear quadrant. No. 7017 was the subject of the naming ceremony at Paddington described on p. 530 of our issue of November 5, 1948.

We are indebted to Mr. F. W. Hawksworth, Chief Mechanical Engineer, Railway Executive, Western Region, for the photograph and diagram reproduced on the opposite page.

Hanger Lane Station, London Transport

A new permanent station on the Central Line opened to the public on January 2

THE permanent station building at Hanger Lane, Central Line of London Transport, was opened to the public on January 2, and replaces a temporary ticket hall and footbridge brought into service when the line was extended to Greenford about 18 months ago.

Erected by Holliday & Greenwood Limited, the new station is a reinforced-concrete frame structure clad in cavity brickwork. The structural frame is monolithic with a 12-in. concrete slab rein-

forced top and bottom and carried on a pre-cast piling driven through a clay embankment to rock strata. The suspended floors and roofs are of 6-in. reinforced-concrete slab cast *in situ*.

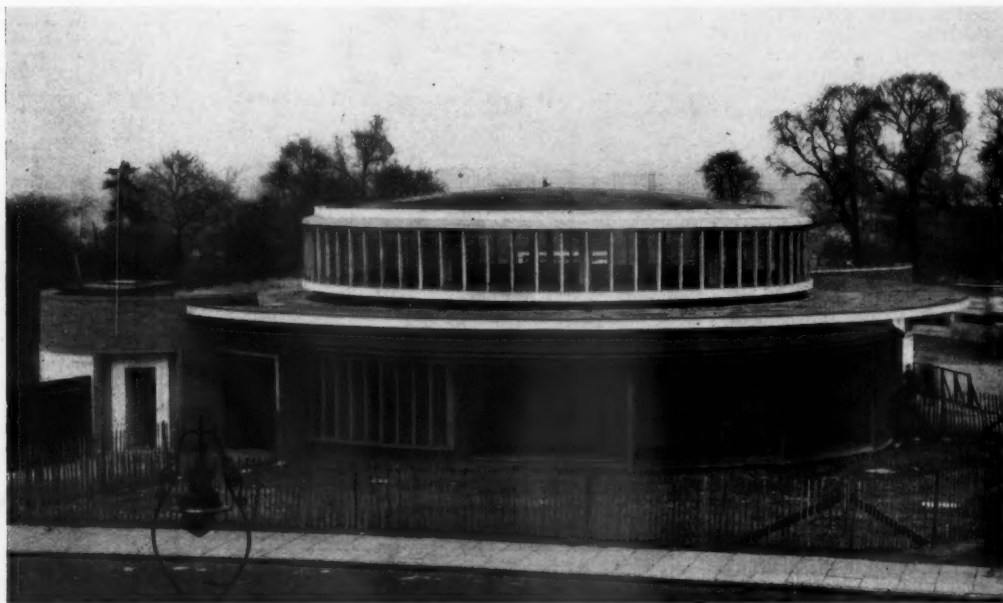
A feature of the construction is the 4-in. reinforced-concrete slab roof to the circular ticket hall. This consists of a shallow dome rising 2 ft. 6 in. in a diameter of 44 ft. Throughout the job wood-wool slabs 1 in. thick on internal and 1½ in. thick on external work have been

used as permanent shuttering on the soffits of horizontal slabs to form an economical thermal insulation.

The external walls are of fairface brickwork and reinforced concrete, rubbed down with carborundum discs, and finished either with a stippled slurry composed of one part white Portland cement and one part Portland cement or with cream cementone.

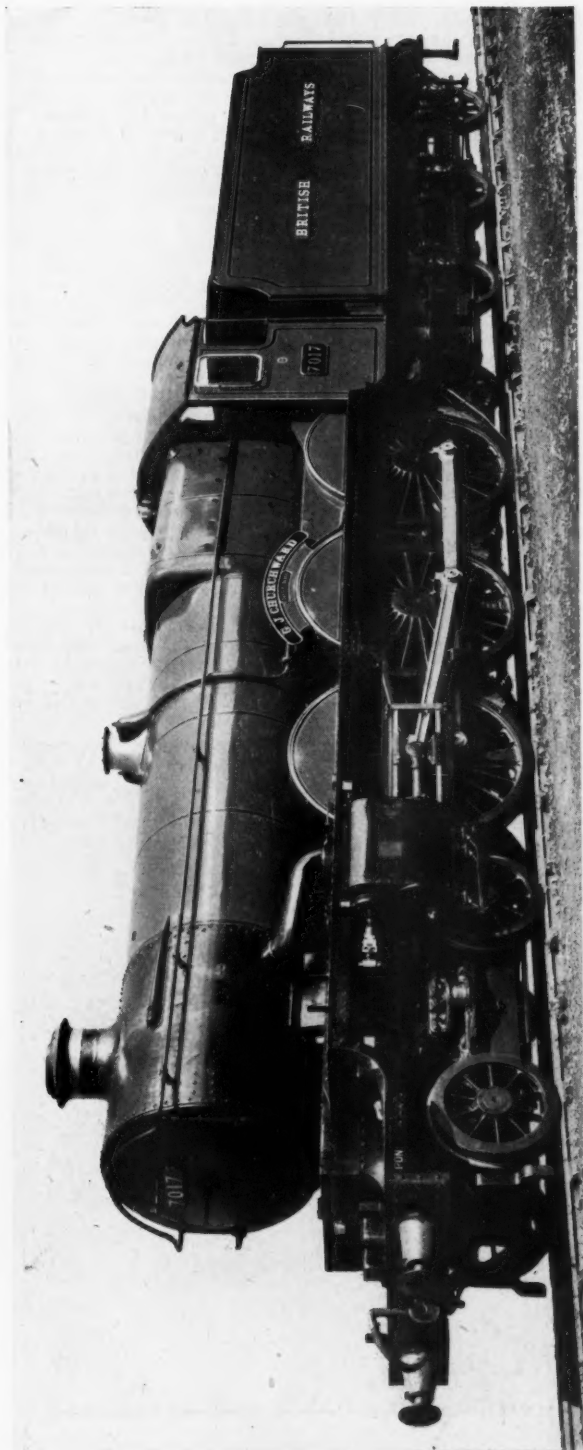
The torque of the reinforced-concrete canopy, cantilevered for half the perimeter of the building, is counter-balanced largely by the staff accommodation which is partly suspended from the main structure over the down electric track.

(Continued on page 22)

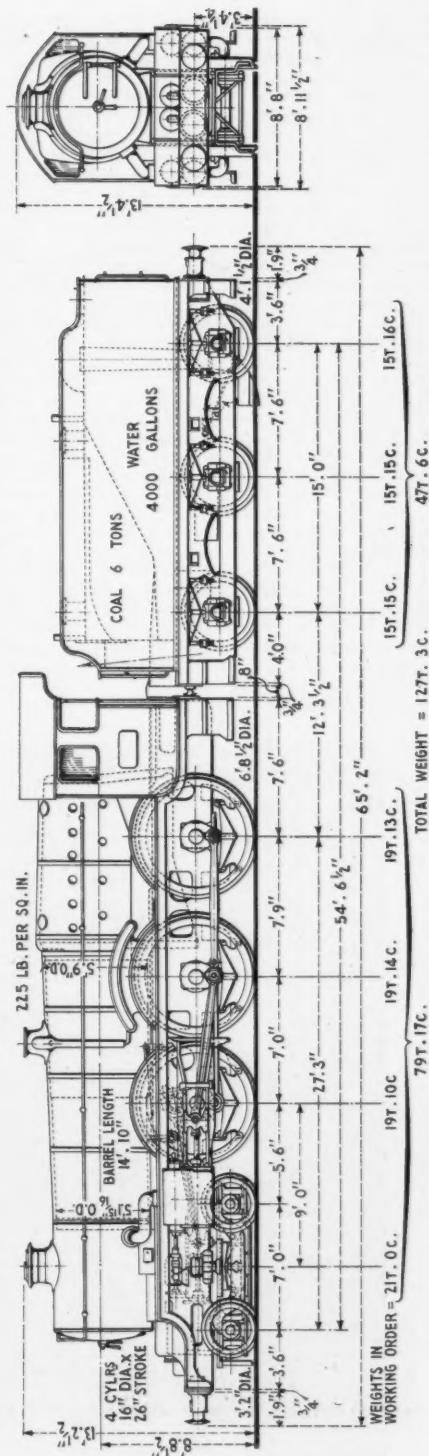


Hanger Lane Station, London Transport, opened to the public last Sunday

The Swindon "Castle" Class Locomotives



No. 7017, "G. J. Churchward," one of the most recent series of "Castle" class locomotives



Principal weights and dimensions of the latest Western Region "Castle" class 4-6-0 locomotives

An Important Source of Track Ballast

The development and products of Meldon Quarry, Dartmoor, Southern Region

WHEN the Plymouth line of the London & South Western Railway was extended from Okehampton to Lydford, it was noticed that the rock in the cutting near the east end of Meldon Viaduct, some two miles west of Okehampton, was particularly suitable for track ballast. The site was considered for future development, but, although the railway was opened in October, 1874, it was not until 1897 that quarrying operations were begun. At first, the stone was loaded direct into wagons standing on the down main line, but sidings and a crushing plant were provided as soon as sufficient space had been cleared. The site has been developed progressively, and the quarry face, crushing plant, and sidings are now completely removed from the main line.

The quarry is situated on the northern edge of Dartmoor, on a hillside composed of very hard shale and dolerite, interspersed with occasional bands of softer shale, for which little or no use can be found. The geological formation is complex, but, for the most part, the beds dip towards the north-west, at an angle of about 55 deg. The stone is used extensively for track ballast, and the chippings for shovel packing, throughout the Southern Region. The quarry also produces lump stone for walling, washed aggregate for concrete, road stone chippings, and dust for the blanketing of track.

The main level of the quarry stands at

a height of 860 ft. above sea-level, and the quarry face, which extends for a distance of nearly 900 yd., has a maximum height of over 100 ft. A second level, at 950 ft., is being developed, but is not yet in full production. Preliminary work has also been started on a third and higher level.

Another recent development has been the construction of a hopper, 70 ft. long by 40 ft. wide by 90 ft. deep, hewn out of the solid rock. This hopper, which has a capacity of 6,000 tons of broken stone, is situated at the 950 ft. level, but there are plans to connect it with the 980 ft. level when the development of that site is further advanced. The door at the bottom of the hopper opens into a tunnel, more than 300 ft. long, through which the stone is carried to the crushing plant on a belt conveyor.

Not only does this arrangement facilitate the removal of the stone from the higher levels, but, when bad weather makes work at the quarry face impossible (a by no means rare contingency in such an exposed situation), the contents of the hopper provide a reserve supply of stone for the crushing plant. So far, only trial batches of stone have been sent along the conveyor, but there is every indication that the arrangement will prove very successful.

Quarrying operations begin with the removal of the overburden of vegetation and useless earth for a considerable distance back from the top of the quarry

face. The underlying rock is thus left clean, and free from extraneous matter. As a safety precaution, loose stones are removed with the overburden.

The stone is quarried mainly by tunnel blasting, but subsidiary blasting is carried out on ledges, or benches, which provide a foothold for the quarrymen and their equipment. Ledges are used when tunnel-blasting would be unsuitable, and work of this type is frequently necessary to clean up a new quarry face behind a large tunnel blast. The stone is won by explosive charges inserted in a series of holes drilled from the top of the quarry face or ledge. The drills are driven by pneumatic power generated by two compressors, worked by 105-h.p. diesel engines, and distributed round the top of the quarry in a 6 in. steel main. The air leaves the compressor at a pressure of 100 lb. per sq. in., to ensure that the pressure available for drilling is maintained at 80 lb. per sq. in. The compressor also provides power for the drill-sharpening shop.

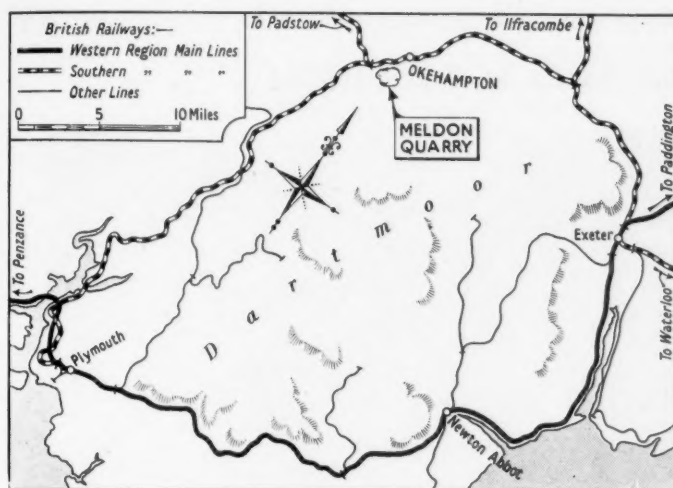
Tunnel Blasting

For a tunnel blast to be fully effective, the height of the quarry must be at least 30 ft. A small tunnel is driven from ground level, at 90 deg. to the quarry face, to a depth equal to $\frac{1}{2}$ to $\frac{3}{4}$ the height of the face, and a side tunnel, parallel to the face of the quarry, is driven in one or both directions from the end of this heading, according to the amount of rock to be removed, as shown by a survey of the site.

The explosive charges are placed in chambers in the side tunnels, and connected by wires to the firing point. The tunnels are then packed with broken stones and dust, to form a lock, and the



Aerial view of Meldon Quarry from the north, showing the working faces, crushing plant, and offices. The railway from Okehampton to Plymouth, in the foreground, is crossed by the bridge to the spoil tip



Position of Meldon Quarry in relation to main-line railways

charges detonated electrically. The explosion blows out the lower part of the quarry face, while lifting and shearing the rock above, which, deprived of support, slides downwards, from a natural line of cleavage. It is usual for tunnel blasts to be made late in the afternoon, so that any secondary falls of rock can occur during the night, without endangering the quarrymen.

Every tunnel has its individual features, which vary according to the position of the planes of cleavage, and a careful survey of the site is necessary, to determine the length of the side tunnels and the amount and type of explosive required. The yield varies from five to eight tons of stone for every lb. of explosive used. A typical blast produces from 20,000 to upwards of 60,000 tons of stone, and these limits suit the working of the quarry.

Although much of the stone dislodged by the blast can be dealt with by hand, explosives have to be used to break up the larger blocks before they can be

removed to the crushers. In many cases it is sufficient to place the charge on the top of the stone, under a heavy cap of clay, but exceptionally large blocks have to be drilled for the insertion of the charge. To avoid loss of time, this secondary blasting is carried out while all the workers, except the shot-firers, are taking their mid-day meal. Warning that blasting is taking place is given by audible and visible signals, and the charges must not be fired until an assurance has been received from the nearby signalbox that no trains are approaching on the main line.

When the blasting and breaking by hand have been completed, the stone is selected, and removed to the crushers. The trains of 2-ft. gauge tip-wagons, hauled by 40-h.p. diesel locomotives, formerly used for this purpose, are now being superseded by mechanical road transport, which has proved more mobile and economical. Large steel pans, lifted by 5-ton mobile cranes, are used to load the lorries. Stone

not required immediately at the crushers is tipped on the quarry floor to form a reserve supply. The average weekly output of quarried stone is about 5,500 tons.

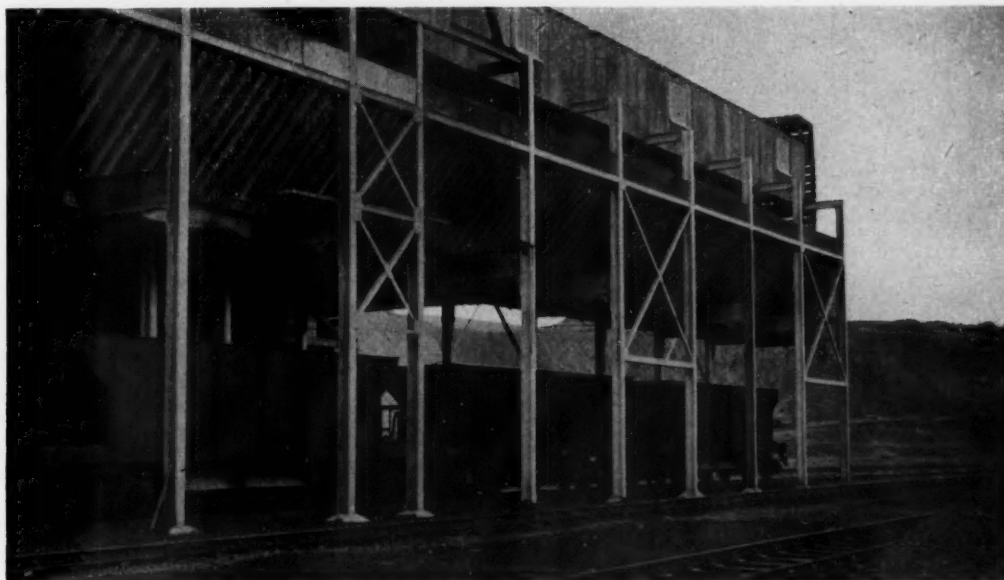
Gyratory Crushers

The quarry is equipped with two electrically-driven crushing plants, each capable of dealing with 70 to 75 tons of broken stone an hour. Power for the motors is drawn from the public supply mains. The two plants are similar, but not identical. In one case, the stone is tipped, at ground level, into a gyratory crusher, which reduces it to a maximum size of 3 in., and carried by a bucket elevator on to a revolving cylindrical screen. From the underside of this screen, the stone is delivered by a second bucket elevator to an upper revolving screen. Stones more than 2 in. in size are rejected at the first screening, and pass on to the second bucket elevator through a jaw crusher.

The upper screen consists of three concentric perforated drums, which separate stones varying in size between 2 in. and $\frac{1}{2}$ in. (the upper and lower limits respectively for standard ballast) from smaller stones, chippings, and dust. The screened material is delivered to the appropriate storage hoppers by chutes and conveyor belts.

In the second (and newer) plant, the stone passes through a gyratory crusher, set at 3 in., and is carried by a bucket elevator, and a belt conveyor, to a triple deck vibratory screen which selects the sizes suitable for standard ballast. Over-size stones are rejected, and are returned for recrushing in impact crushers, or stored for future use. The smaller material passes along a conveyor belt to a second triple deck vibratory screen, and thence to the storage hoppers. Both plants produce approximately 66 tons of standard ballast from 100 tons of quarried stone.

The storage hoppers are elevated above the sidings, and the stone is loaded into railway wagons by gravity. The eight-wheel hopper wagons used for distributing the ballast are fitted with continuous brakes, and have a tare weight of 20 tons. A standard train consists of 10 hoppers
(Continued on page 22)



Thirty-five-ton ballast wagons on the loading siding under the storage hoppers

An Important Source of Track Ballast



Meldon Quarry, Dartmoor, Southern Region. View of the quarry face, showing preparations for a tunnel blast



Drilling rocks dislodged by a tunnel blast for secondary blasting

Reconstruction of Rhine Bridge at Düsseldorf

The northern span of the twin double-line bridges rebuilt with one undamaged and one dislodged, raised, and repaired span from the southern bridge

PRIOR to 1945, the Rhine was crossed at Düsseldorf, now in the British Zone, by twin double-line railway bridges. They were identical structures, each having four spandrel-braced two-hinged steel arch spans 355 ft. in length, and they were parallel and spaced 105 ft. apart, centre to centre. In their retreat before the advancing Allies in that year, the Germans demolished the central pier of each of these bridges, with the result that the four mid-stream spans dropped into the river. Only one of these four spans was recoverable, namely No. 2 span of the south bridge; spans 1 and 4 in both bridges were practically undamaged.

Lack of this important four-line trans-

spans by two comparatively light SKR-type German military truss spans. One of these was first erected between the arch ribs of undamaged span No. 4, and was then used as a counterweight to enable the second temporary span to be erected as a cantilever across gap No. 3. Subsequently, the span previously used as a counterweight was removed and similarly erected as a cantilever across gap No. 2, using the temporary span already in its final position across gap No. 3 as its counterweight. A temporary single-line bridge was thus erected within three months, and was available for trans-Rhine traffic by the winter of 1946-47.

From the outset, however, it had been

for the permanent reconstruction work, only what was serviceable or capable of being made serviceable in the two pre-1945 bridges was available. In point of fact, No. 1 span of the south bridge, though undamaged, could not be used to rebuild the north bridge because this would have entailed the erection of falsework restricting the navigation channel beneath this span. The material that could be used was, therefore, undamaged spans 1 and 4 in the north bridge, which could be left intact and again used as double-line spans; No. 4 span in the south bridge, which was also undamaged; and No. 2 span in that bridge, which could eventually be made serviceable. It was, however, lying with its west end submerged and resting on the river bed some 50 ft. lower than its east end, which was still on its pier. Not only was this span longitudinally inclined at a 1 in 7 slope, but it was also tilted transversely and buckled.

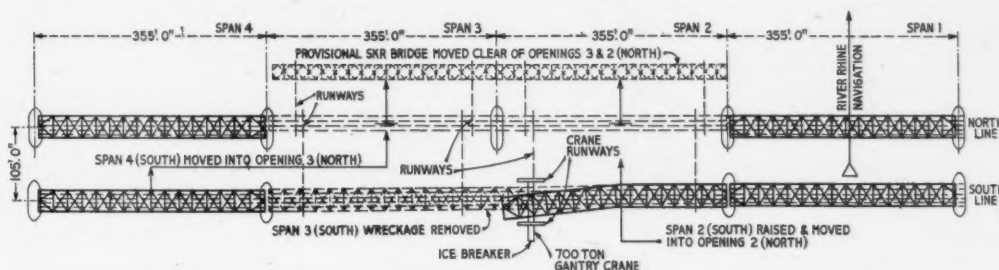


Diagram showing, in plan, the movements of the temporary spans, and of the south bridge spans, to form the permanent north bridge

Rhine communications link made it imperative that both short-term and long-term restoration should be proceeded with as rapidly as possible. As foreshadowed in an article on page 460 in our issue of April 26, 1946, it was decided to begin forthwith by providing a single-line temporary structure in order to restore traffic over the north bridge. This was effected by replacing the two demolished central

realised that a temporary single-line structure would be a poor substitute for the two double-line pre-1945 bridges, and consequently preliminary work on both temporary and permanent reconstructions had proceeded side by side. In fact, the erection of the gantry crane now described had been completed before the temporary spans were in place.

As no new material could be expected

The problem before the engineers was, therefore (a) to lift the west end of south bridge No. 2 span—a lift equivalent to 700 tons—carry out the necessary repairs to it, and transport this 1,000-ton arch span across from the south bridge to replace No. 2 temporary span in the north bridge, and (b) to move south bridge No. 4 span, not only transversely, but also longitudinally, to take the place of temporary span



Erection of one of the SKR temporary spans by the cantilever method. Gantry for raising span of south bridge is shown on the right

No. 3 in the north bridge. That this problem was satisfactorily solved is clear from a description of the work in the form of an article recently contributed by Herr Rudolf Neumann to our American contemporary *Engineering News-Record*.

In order to raise south bridge No. 2 span into a horizontal position, a gantry crane with a lifting capacity of 700 tons had to be erected astride that sloping and tilted span. To support the legs of this crane rows of 16-in. steel piles were driven on each side of the span, and capped with heavy girders. The erection of the gantry superstructure was effected with the aid of a 20-ton derrick having a 90-ft. boom, which had to be erected on a temporary working platform perched precariously over the sloping top chords of the inclined and tilted span. As the span was about 10 ft. out of plumb, and as there was no certainty of the stability of its end resting on the river bed, this preliminary job caused considerable anxiety to the engineers. As Herr Neumann writes: "Extensive statical investigations of the centre of gravity under wind and water pressure and other loading conditions were made by the writer, who was tremendously relieved when the operation was completed."

Span Lifted in Two Weeks

Once the gantry had been erected, only two weeks were necessary to lift the end of the span through a height of about 50 ft.; this was done by means of pinned hangers connecting the span chords to hydraulic jacks mounted on the gantry. Meanwhile, staging consisting of steel piles carrying two lines of heavy capping girders, had been erected transversely between the two bridges so as to form runways for rolling the raised and repaired span across the intervening 105 ft. The span was lifted on to two special steel carriers each weighing 20 tons and

mounted on four bogies running on these runways.

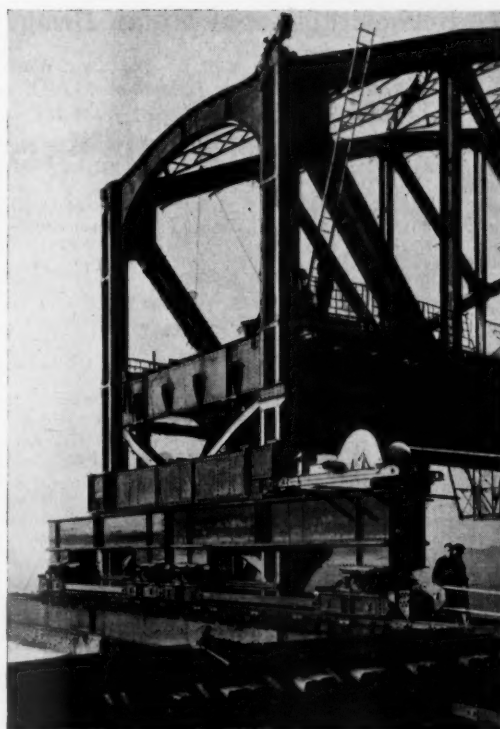
The corresponding temporary span in the north bridge was also mounted on similar carriers, so that, after the removal of the gantry crane, both spans could be hauled transversely and northwards by winch and tackle, the temporary span clear of the north bridge, and the permanent span from the south bridge across into its final position as No. 2 span in the north bridge. The rolling operation required a 24-hr. interruption of traffic.

No. 4 Span

The job then remaining was to remove south bridge No. 4 span transversely and longitudinally to form No. 3 span of the north bridge. For this purpose similar pile and girder runways were erected, so that this span—mounted on carriers released from span No. 2—could be hauled, first, 50 ft. transversely or northwards, then 355 ft. longitudinally and eastwards, and finally 55 ft. again northwards to fill gap No. 3, while the corresponding temporary span was hauled outwards to make room for it.

The magnitude and difficulties of the work as a whole are commented on in an editorial note on page 2. So far no decision can be made with

regard to the rebuilding of the south bridge, as this will require three entirely new 355-ft. spans. It will probably be some time before so much material can be made available.



Special steel carriers, with bogie supports, for moving south bridge spans across to north bridge



The reconstructed north bridge, also showing the staging used for moving No. 3 south bridge span to form No. 2 span of the north bridge

RAILWAY NEWS SECTION

PERSONAL

NEW MEMBER OF THE RAILWAY EXECUTIVE

The Minister of Transport has announced that General Sir Daril Watson has accepted his invitation, made after consultation with the British Transport Commission, to become a Member of the Railway Executive. Sir Daril Watson enlisted in the Army in 1914 and was commissioned in the next year. He held important commands during the 1939-45 war, and in 1946-47 was Quartermaster-General.

Mr. Gustaf Dahlbeck, General Manager of the Swedish State Railways, who retired on December 31, was born at Ostersund in 1883, and graduated as Civil

London, is returning to South Africa to take up the appointment of Assistant Chief Stores Superintendent, South African Railways. Mr. W. H. Maass, who was Assistant Advisory Engineer (and Acting Advisory Engineer from January, 1941, to November, 1945), S.A.R., London, until he left in 1946 for South Africa to become Mechanical Engineer, East London, will be returning to London to succeed Mr. Ward Smith.

Mr. A. L. Rawlinson, European Passenger Manager of the Canadian Pacific Railway, who retired on December 31, was born at Wallasey (Cheshire), of which his father was a one-time Mayor. He began his business career in 1900, by apprenticeship with Ismay & Company.

Waterways Officer, North Eastern Division, from January 1. A portrait and biography of Mr. Hitchcock appeared in our issue of March 19 last.

Mr. E. M. Rutter, Superintendent, North Eastern Region, British Railways, retired on December 31.

Mr. George A. Hobbs who has been appointed European Passenger Manager, Canadian Pacific Railway, joined the company's Passenger Department at Winnipeg in 1912, after education at Winnipeg and at the Merchant Venturers College, Bristol. He served in the Mechanical Transport Section of the Canadian Army in the 1914-18 war, and after demobilisation was in the service of the Custodian



Mr. Gustaf Dahlbeck

General Manager, Swedish State Railways, 1938-48



Mr. A. L. Rawlinson

European Passenger Manager, Canadian Pacific Railway, 1944-48



Mr. G. A. Hobbs

Appointed European Passenger Manager, Canadian Pacific Railway

Engineer at the Royal Technical University, Stockholm, in 1906. In the same year he entered the Highways Department. His railway career began in 1909, when he was engaged on construction of the Swedish Inland Line in Nordland. In 1916 he was in charge of widening works, having been appointed Permanent Way Engineer of the State Railways administration in 1915. In 1919 he was made Chief of Administration, Engineering Department. He became Manager of the Fifth District in 1927, and in 1932 went to Gothenburg as Manager of the Second District, the position he held up to his appointment as General Manager in 1938.

Mr. E. Upmark, previously Head of the Fuel Commission in Sweden, has been appointed General Manager of the Swedish State Railways, in succession to Mr. Dahlbeck. Mr. T. Emers, Assistant General Manager, Swedish State Railways, retired on December 31, and is succeeded by Mr. E. Oredsson.

Mr. R. T. Clews, Assistant Superintendent of Motive Power, London Midland Region, has retired, due to ill health.

Mr. H. D. Ward Smith, Advisory Engineer, South African Railways, Office of the High Commissioner for South Africa,

In 1912 he joined the Allan Line, and he went over to the Canadian Pacific when the two companies amalgamated. In 1922 he was transferred to the Antwerp office as Passenger Agent. For several years he travelled widely in many countries, and among other honours was decorated with the Order of the Crown of Roumania. In 1928 Mr. Rawlinson was recalled to London to handle developments in Continental business, and in 1934 he was made General Passenger Agent. In 1937 he was appointed Assistant European Passenger Manager, and, in 1944, European Passenger Manager.

In view of his recent departure for a long visit to Australasia, Sir William Coates has resigned from the Economic Planning Board.

The late Mr. Sidney Emile Garcke, a pioneer of the provincial bus industry, and for 20 years a Director of the British Electric Traction Co. Ltd., left £258,627.

N.E. DIVISIONAL WATERWAYS OFFICER

With the approval of the British Transport Commission, the Docks & Inland Waterways Executive has appointed Mr. W. M. Hitchcock (hitherto Assistant Commercial Superintendent, Western Region, Railway Executive), to be Divisional

of Enemy Debts. He rejoined the Canadian Pacific, in London, in 1923, and was transferred three years later to the Paris office, becoming successively Chief Clerk and Passenger Agent. In 1937 he returned to London as General Agent, Passenger Department, and in April, 1946, was appointed General Passenger Agent.

Mr. George H. Bailey, Chief Engineer (Designs), Metropolitan-Cammell Carriage & Wagon Co. Ltd., has retired, after some 46 years' service with the Metropolitan-Cammell group, and has been succeeded as Chief Engineer (Designs) by Mr. Harry Green. Mr. Bailey received his technical education at the Merchant Venturers Technical College. From 1902-08 he was with the Bristol Wagon & Carriage Works Company, and from Bristol went to the drawing office of the old Metropolitan company at Saltley, where he took an active part in the design and development of railway rolling stock. In 1919 he left to take up the position of Chief Draughtsman with the Leeds Forge Company, returning to the Metropolitan company in 1923 to take charge of the combined drawing offices. During the ensuing years he was concerned in the design of all types of rolling stock. Mr. Bailey made many overseas visits in the interests of the company.



Mr. J. Greenwood

Appointed District Operating Superintendent, London (Midland), L. M. Region, British Railways

Mr. J. Greenwood, who, as recorded in our November 19 issue, has been appointed District Operating Superintendent, London (Midland), London Midland Region, British Railways, was born at Leicester, and entered the service of the L.N.W.R. in 1914 as a junior clerk at Birmingham. He served as a wireless telegraphist in the R.N.V.R. from 1917 to 1919, and on his return to the L.N.W.R. in the latter year became relief booking clerk at New Street Station, Birmingham. In 1922 he was appointed Stationmaster, Vauxhall & Duddleston, and he was made District Inspector at Birmingham Control Office, L.M.S.R., in 1929, and Station Inspector, New Street Station, Birmingham, in 1931. Mr. Greenwood was Assistant Stationmaster, Preston, from 1933-37, during which time he acted as Passenger Agent, Preston, for six months. In 1937 he was appointed Assistant District Controller, Willesden, and for two periods before his next appointment acted as District Controller. After the re-organisation of the Chief Operating Manager's Department of the L.M.S.R. and the formation of the district operating managers' offices, he was appointed, in 1946, Assistant District Operating Manager, London (Western), the position he vacates on his new appointment.

Mr. R. J. Powell, who, as recorded in our December 24 issue, has been appointed District Operating Superintendent, Barrow-in-Furness, London Midland Region, British Railways, joined the Glasgow & South Western Railway at Sanquhar in 1912, and was transferred to the Office of the Superintendent of the Line at Glasgow (St. Enoch) in 1915. After naval war service from 1916-19, he returned to the same office, and in 1923 was transferred to L.M.S.R. divisional headquarters at Glasgow, where he held the following successive appointments:—Passenger Rolling Stock Controller; Assistant Divisional Controller (Passenger Services); and Assistant Divisional Trains Clerk. In the last-named position he regularly attended War Office conferences in connection with the movement of troops into and out of the country during the war years. In the summer of 1939 Mr. Powell acted as Outdoor



Mr. R. J. Powell

Appointed District Operating Superintendent, Barrow-in-Furness, L.M. Region, British Railways

Assistant to the District Goods & Passenger Manager, Ayr. In 1944 he was appointed Assistant District Goods & Passenger Manager, Perth, from which position he was appointed District Controller, Carlisle, in 1946. In January, 1948, the operating and commercial activities at Carlisle were merged, and he became Assistant District Traffic Superintendent, the post he vacates on his present appointment. During the recent war he held the rank of Captain in the 7th City of Glasgow (L.M.S.R.) Battalion, Home Guard.

SCOTTISH REGION ORGANISATION

In connection with a re-organisation in the Scottish Region of British Railways, from January 1, 1949 (see also page 11), the Railway Executive has appointed the following officers to take charge of the various districts:—

Commercial Superintendent's Department
Mr. J. M. Fleming, District Commercial Superintendent (Goods), Glasgow; Mr. H. R. Statham, District Commercial Superintendent (Passenger), Glasgow; Mr. R. W. Rose, District Commercial Superintendent, Edinburgh; Mr. C. J. H. Seife, District Commercial Superintendent, Dundee.

Operating Superintendent's Department
Mr. A. F. Moss, District Operating Superintendent, Glasgow; Mr. G. Crabtree, District Operating Superintendent, Edinburgh; Mr. H. F. Smart, District Operating Superintendent, Burntisland.

Commercial and Operating Superintendents' Departments

Mr. J. W. Barr, District Traffic Superintendent, Aberdeen; Mr. J. Smith, District Traffic Superintendent, Ayr; Mr. A. Yeaman, District Traffic Superintendent, Inverness; Mr. J. Killin, District Traffic Superintendent, Perth.

Motive Power Superintendent's Department

Mr. R. White, Mr. W. Dunsmuir and Mr. J. M. Fyfe become Assistants to the Motive Power Superintendent.

The following appointments as District Motive Power Superintendent have been made: Mr. S. T. Clayton (Glasgow North); Mr. R. P. Critchley (Glasgow South); Mr. R. Thompson (Edinburgh); Mr. K. R. M. Cameron (Ayr); Mr. W.



Mr. William McCoubrey

Appointed Assistant General Manager, British & Irish Steam Packet Co. Ltd.

Russell (Perth); Mr. J. Lamond (Carlisle, Kingmoor); Mr. B. P. Blackburn (Burntisland); Mr. A. C. Jeffery (Inverness). As from April 1, 1949, Mr. J. F. K. Davidson will succeed Mr. J. H. Thomson (Aberdeen) on the latter's retirement.

Signal & Telecommunications Engineer's Department

Under the re-organisation, Mr. H. O. Baldwin is Assistant Signal & Telecommunications Engineer, Scottish Region, and Area Assistants are located at Glasgow North, Glasgow South, Edinburgh, Ladybank, Perth and Dumfries.

Civil Engineering Department
The Civil Engineering Department appointments will be announced later.

District Goods & Passenger Managers
The District Goods & Passenger Managers at Aberdeen (Mr. John Cook); Edinburgh (L.M.S.R.) (Mr. John Brewster); Edinburgh (L.N.E.R.) (Mr. J. Lorimer); and Perth (Mr. C. J. Foster) are retiring; and Mr. A. Paterson, who has been Acting District Goods & Passenger Manager at Dundee, is returning to the Glasgow Commercial District.

We regret to record the death of Mr. N. Greenhalgh, Sales Director of Burton, Griffiths & Co. Ltd., aged 63.

Mr. S. M. Taylor, Assistant District Engineer, Guide Bridge, Eastern Region, British Railways, has been appointed Acting District Engineer, Guide Bridge.

Mr. William McCoubrey has been appointed Assistant General Manager of the British & Irish Steam Packet Co. Ltd. He was born in August, 1898, and joined G. & J. Burns, Limited, in Belfast in 1916. He entered the service of the British & Irish Steam Packet Company in 1921, was appointed Personal Assistant to the General Manager in 1925, and three years later was promoted to be Chief Clerk in the Traffic Department. In 1932, Mr. McCoubrey was appointed Traffic Manager, and became his company's representative at the Irish & English Traffic Conference and at the Railway Clearing House, London, and the Irish Railway Clearing House. He has been Chairman of the Customs Joint Committee of the Railway Clearing House, London, since 1939.

The New Year Honours List

The following is a selection of honours of transport and industrial interest from the New Year list:—

Knights Bachelor

Mr. Joseph Holland Goddard, President, Machine Tool Trades Association.

Dr. Henry Lewis Guy, C.B.E., D.Sc., M.I.C.E., M.I.Mech.E., F.R.S., Chairman of the Mechanical Engineering Research Organisation, Department of Scientific & Industrial Research, Secretary, Institution of Mechanical Engineers.

Mr. John Hacking, M.I.E.E., for services to the electricity supply industry.

The Hon. Norman Martin, Agent-General for the State of Victoria in London.

Mr. Donald MacLean Skiffington, C.B.E., J.P., Director, John Brown & Co. Ltd., Clydebank.

Companion of Honour

Mr. Arthur Deakin, C.B.E., General Secretary, Transport & General Workers' Union.

G.C.M.G.

The Rt. Hon. Wyndham Raymond, Viscount Portal, D.S.O., M.V.O., for services as President of the Olympic Games. Chairman, Great Western Railway Company, 1945-47.

C.B. (Civil Division)

Mr. Walter Carter, C.B.E., lately Principal Assistant Secretary, Ministry of Transport.

C.B.E. (Civil Division)

Mr. John Eric Sturton Bodger, lately General Manager, Ceylon Government Railway.

Alderman Walter Bradley, J.P., A.M.I.Mech.E., Chairman, National Joint Industrial Council for the Road Passenger Industry.

Mr. Oliver Vaughan Snell Bulleid, M.I.Mech.E., M.I.Loco.E., Chief Mechanical Engineer, Southern Region, British Railways.

Mr. William Philip Neville Edwards, Head of the British Information Services in the United States of America. Formerly Joint Public Relations Officer, London Passenger Transport Board.

Mr. James Mitchell, Managing Director, Iron & Steel Production, Stewarts and Lloyds Limited.

Mr. Harold Wilmot, F.C.W.A., M.I.Loco.E., President, Locomotive Manufacturers' Association of Great Britain.

O.B.E. (Civil Division)

Mr. Russell Bailey, M.I.Mech.E., Joint Managing Director, Charles Roberts & Co. Ltd.

Mr. John Henry Brown, Head of Appointments Department, Crown Agents for the Colonies.

Mr. Austin Busby, Assistant General Manager, Nigerian Railway.

Mr. Arthur Lane, Chief of Police, Western Region, British Railways.

Mr. Arthur Mackay Newbold, General Agent in France of British Railways.

Mr. Norman Frederick Shillingford, M.B.E., C.A., formerly Honorary Treasurer, National War Fund, Chief Commissioner, Boy Scouts, and Officer Commanding Southern Rhodesia Police Reserve. Chief, Accounts & Finance Officer, Rhodesia Railways.

Mr. Henry Norwood Trye, for services as Traffic Auditor, L.P.T.B.

Mr. Frank Whyte, M.C., M.I.C.E., Engineer & Manager, Caledonian Canal. Lt.-Colonel Ernest Woodhouse, Inspecting Officer of Railways, Ministry of Transport.

Mr. Joseph Wright, Director & General Manager, Dunlop Rim & Wheel Co. Ltd.

M.B.E. (Civil Division)

Brigadier William Elliott Blakey, M.M., Assistant Commercial Superintendent, Eastern Region, British Railways.

Mr. William Buchanan, Chief Production Engineer, G. & J. Weir Limited, Glasgow.

Mr. Charles William Conyers, Chief Inspector, Motive Power Superintendent's Office, North Eastern Region, British Railways.

Mr. Herbert Leadley, Personal Assistant to Chief Secretary & Legal Adviser, British Transport Commission.

Mr. Lionel Lynes, M.I.Mech.E., Technical Assistant for Carriages & Wagons, Southern Region, British Railways.

Mr. Charles Hugh Marland, Chief Mechanical Superintendent, Goole, Docks & Inland Waterways Executive.

Mr. Frederic George Wilson Potter, Senior Storekeeper, Nigerian Railway.

Mr. Hugh Rigby Rowbotham, Member, Wolverhampton District Committee, Midland Regional Board for Industry. Joint Managing Director, Joshua Bigwood & Son Ltd.

Mr. Frank William Sellwood, M.Inst.T., Traffic Manager, Southdown Motor Services Limited.

Mr. William Robinson Shann, A.M.I.Mech.E., Engineering Inspector, Crown Agents for the Colonies.

Mr. Tom Herbert Wakefield, District Controller, Toton, London Midland Region, British Railways.

Mr. Harold Arthur Walker, District Superintendent, Country Buses & Coaches, London Transport Executive.

Mr. Alfred Ernest Ward, Manager, Import Department, British Iron & Steel Corporation.

Mr. Richard John Willis, Apparatus Works Engineer, Siemens Bros. & Co. Ltd.

We regret to record the death on December 30 of Mr. A. Douglas Carroll, at one time Chief Engineer, Bengal Nagpur Railway, in his 71st year.

We regret to record the death on December 30, in his 76th year, of Mr. Vernon Hinde, who retired in 1943 from the position of London Manager & Secretary, San Paulo (Brazilian) Railway Co. Ltd., of which he had since been a Director.

We regret to record the death on December 23 of Monsieur Robert Henri Le Besnerais, General Manager of the French National Railways Company from its formation in 1938 until the early part of 1945. Previously he had been General Manager of the Northern Railway Company of France.

Sir Philip Mitchell, Chairman of the East Africa High Commission, Mr. E. R. E. Surridge, Acting Governor of Tanganyika, Sir Reginald Robins, Member for Transport, East Africa High Commission, and Mr. A. Dalton, General Manager, and Mr. J. R. Farquharson, Chief Engineer & Deputy General Manager, East African Railways & Harbours, recently arrived in London to take part in conferences on the transport problems of East Africa. Ministers who have been attending the meetings include Mr. A. Creech Jones, Secretary of State for the Colonies, Mr. J. Strachey, Minister of Food, and Mr. L. J. Callaghan, Parliamentary Secretary, Ministry of Transport (in place of Mr. Alfred Barnes, Minister of Transport, who has been unable to attend on account of indisposition).

SIR CYRIL HURCOMB'S NEW YEAR MESSAGE TO STAFF

Sir Cyril Hurcomb, Chairman of the British Transport Commission, has sent the following New Year message to staff:—

In sending my good wishes for the New Year to all staff I would like to refer very briefly to the work of the last twelve months. A year ago—on January 1, 1948—the British Transport Commission took over the British railway system, the London Passenger Transport Board, the majority of the canals, nearly one-third of the country's docks, a fleet of 70 cross-channel ships and about 60 other vessels, and the group of hotels owned by the railways. Since then, it has acquired half-a-million privately-owned railway wagons, bringing its fleet of revenue-earning wagons to a present total of roundly 1,180,000. It also has taken over 403 road-transport undertakings (including the control of the important Tilling group of companies) with 17,800 passenger and freight vehicles.

The Commission has had two main aims in this first year: to link together the many parts of this great undertaking without undue centralisation, and to get to grips with the problem of restoring and developing the fullest possible services to the public and to industry, while bearing in mind its obligation to keep the undertaking on a self-supporting basis. One of the first steps taken by myself and the Members of the Commission just after our appointment was to arrange an informal meeting with appropriate trade union leaders to assure them that the Commission desired the maximum degree of consultation. Last autumn, the Commission proposed the establishment of a British Transport Joint Consultative Council, with an initial membership consisting of the Chairman and Members of the Commission, members from each of the five Executives, and representatives of the principal trade unions. This proposal was accepted, and the first meeting of the council will be held early in 1949. Throughout the year, excellent relations have prevailed between the Commission and the trade unions. As provided in section 4 of the Transport Act, the Commission was invited by the Minister of Transport to submit to him its proposals for staff training and education. A special body was set up to study the problem. Its survey has now been completed, and arrangements are being made by the Executives to meet the trade unions to discuss the recommendations.

On the railways, useful work was done in 1948 by the Joint Welfare Advisory Council, set up by the Railway Executive with the railway unions, under the chairmanship of Mr. W. P. Allen. This council has made recommendations for standards of accommodation which the Commission has approved, and it has also dealt with the order of priority to be given to schemes for new premises and for improvements to existing premises.

In this process of bringing together the Commission's manifold activities, special importance attaches to the visits which Members of the Commission and Executives have paid to transport centres in all parts of the country. We have inspected many of the principal works, goods stations, training schools and other premises in all the six Regions of British Railways. Some of the main centres for road transport, docks and inland waterways were also visited. I have personally met a large number of local officials and trade union representatives. In speaking to the staffs in all branches of the undertaking I have urged the need for all ranks and grades to co-operate as partners in the work of making the Commission's services more efficient; and I have stressed the part that local representatives can play within the existing machinery.

It is the duty of the Commission to make the new nationalised undertaking self-supporting by taking every possible step to increase efficiency and to provide a high quality of service. The urgency of this task is emphasised by the decline in earnings, more particularly on the railways, during the past year. When the railways increased their fares and charges in October, 1947, it was esti-

mated that they alone would have to earn an additional £65 million per annum to make ends meet. The final results for 1948 cannot be known for some time yet, but it is clear that earnings are falling far short of expectations; at the end of November, the railways' additional earnings had only just reached £34 million. Since the railways bring a very high proportion of the income accruing to the Commission, this shortfall is bound to have a serious effect on the Commission's finances generally.

Along with the Commission's other undertakings, the Railway Executive has shown its determination to attract additional business by offering improved services for passengers and goods. Punctuality has improved. The 1948 summer timetables included a large number of additional trains; each Saturday, for example, there were 512 more trains than in the summer of 1947. Sleeping car services were extended. Many more refreshment trolleys appeared on station platforms; refreshment rooms were renovated and cleaned up; 117 more trains included restaurant or buffet cars. The "Queen of Scots" came back for the first time since the war; new named trains were introduced; and the "Flying Scotsman" started to run between Kings Cross and Edinburgh without a stop. This winter, the number of trains with reserved seats went up to 365—more than three times the number running last winter. Some new business was also attracted by fare reductions. On February 16, the Minister of Transport announced that the restrictions on cheap-fare passenger travel had been lifted, and immediately afterwards the Executive announced that special train facilities would be available for parties travelling at reduced fares. The public was quick to respond, and 47 special trains were booked on the day of the announcement. Many successes were achieved in all parts of the country with special half-day and evening excursion trains arranged to meet a local demand.

London Transport completed an important instalment of the Central Line extensions eastwards to Hainault in May; further instalments in both east and west followed in November. In all, nine new stations were added to its railway system. Meanwhile, progress was made with the British Railways electrification scheme from Liverpool Street to Shenfield which should be ready to come into service at the end of 1949. The difficult electrification work between Manchester and Sheffield was carried a stage nearer completion.

Economy in operation is another means by which the Commission has been seeking to improve the financial position. The movements of locomotives and rolling stock

have been re-planned to increase their effective hours in service. Methods of work were similarly overhauled. Good results have been achieved in many directions. For example, the useful work obtained from freight locomotives has shown a marked improvement: it will probably be found that each locomotive did about 5 per cent. more work at the end of 1948 than it did at the beginning (measured in net ton-miles per total engine-hour).

Though many of the troubles caused by wartime conditions were being gradually overcome, 1948 was nevertheless a difficult year. On the railway freight side, it opened with the aftermath of the 1947 wagon crisis. The efforts of the staff to improve wagon turn-round time and to accelerate repairs helped greatly to overcome it. Later, shortages of materials and supplies grew steadily more serious. The construction programme for locomotives and rolling stock had to be curtailed, more particularly as far as passenger carriages were concerned; other cuts were necessitated by the national need for restricting capital investment. The quality of coal supplied for locomotives remains below that which is required for full efficiency. But the most spectacular difficulties encountered in 1948 were due to the weather. Holiday weather was extremely poor, more particularly in Scotland, and much passenger traffic was lost through this cause. The July heat wave brought an exceptional outbreak of track trouble through rail distortion; in one Region passenger lines at one time were blocked as long as 78 hours. After this heat wave came the storms in Scotland that destroyed ten bridges, tore down many embankments and made the East Coast route from Kings Cross to Edinburgh unusable for ten weeks. Yet this calamity also provided the most dramatic illustration we have had so far of the new unity of the Commission's resources. Experts, repair gangs, special machinery and plant, and assistance of every kind were mobilised in every part of the country and concentrated on the scene of action with a speed and efficiency that won general recognition. In December, the Minister of Transport publicly thanked railway workers and bus drivers for the plucky and resolute manner in which they carried on with their duties in the worst spell of fog for many years.

Staff generally in 1948 have appreciated that good service is the surest way of holding and increasing traffic. I thank the staffs in all branches of the Commission's undertaking—on railways, roads, canals, and docks and in the hotels—for their efforts to start this great new venture successfully. We must look forward together to continued effort and further progress in 1949.

The quarry is equipped with a geological laboratory, in which the stone can be examined, and subjected to severe physical tests. Samples are taken at frequent intervals from the quarry face and the storage hoppers, and detailed records are kept of the results of the tests.

As the quarry is situated on the edge of the moor, two miles from Okehampton, canteen facilities are provided for the staff of about 200, and arrangements are made for their transport. Morning and evening trains call at a platform on the main line, adjacent to the quarry, and special buses are run to and from villages in the neighbourhood. The vehicles used for these road services are converted army ambulances.

PERUVIAN CORPORATION.—The directors of the Peruvian Corporation have announced that the High Court has sanctioned an extension of the debenture moratorium until December 31, 1949, and that the corporation has undertaken to initiate proceedings before the end of July for consideration of a further scheme with its debenture holders.

Mr. George H. Brown has been appointed General Manager for the East, Thos. Cook & Son Ltd., with effect from January 15, and Mr. Coard M. Squarey will succeed him as Ocean Travel Manager.

The late Mr. R. A. P. Setterfield, who retired at the end of 1947 from the position of Manager, Hotels & Catering Department, Great Western Railway, left £4,796.

LONDON TRANSPORT EXECUTIVE

Mr. F. H. Spratling, Treasurer, has been appointed Staff Administration Officer, and will be responsible for actuarial matters, including superannuation, etc., schemes, the central record of staff statistics, and, in collaboration with the Chief Staff & Welfare Officer, organisation and methods other than financial control procedure.

Mr. H. S. Chapman, Assistant Secretary, has been appointed Treasurer.

Mr. F. A. A. Menzler, Chief Development & Research Officer, assumes administrative responsibility for the Central Laboratory (previously known as the Chemical Laboratory, Chiswick) and the three generating station laboratories.

Mr. A. T. Wilford, Chief Chemist, has been appointed Superintendent of Laboratories, responsible for the immediate technical direction of all laboratories.

Mr. A. G. Evershed, Acting Audit Officer, has been appointed an Officer of the Executive, with the title of Audit Officer.

Mr. T. J. Stammers, Divisional Engineer "C" (Rolling Stock—Buses & Coaches), has been appointed an Officer of the Executive.

Mr. G. P. Barnett, Superintendent of Recruitment & Training, has been appointed Recruitment, Training & Education Officer, responsible for the recruitment of wages staff, central training policy, education and staff relations.

Mr. K. R. Thomas has been appointed a Principal Executive Assistant, responsible for the work of the training and education and staff relations sections.

Mr. H. W. Aldridge has been appointed a Principal Executive Assistant and will act as deputy to the Treasurer.

Mr. J. R. Garwood has been appointed Divisional Superintendent (South—Trams & Trolleybuses).

An Important Source of Track Ballast

(Concluded from page 15)

and a brake van, and contains 320 cu. yd. of ballast, weighing 350 tons. A fleet of some 90 hoppers is attached to the quarry, and the reballasting programme of the Southern Region for the present year calls for an average of 10 trains a week. Chippings and dust are sent out in ordinary open wagons, which are marshalled into goods trains, or made up into separate trains of about 22 wagons.

Washed Chippings

An old crusher building has been adapted for washing chippings required for concrete aggregate. The washed aggregate is discharged direct to railway wagons. Water for the washing plant is drawn from a reservoir on the moor, above the quarry. The slurry passes down a chute to precipitation tanks, and the filtered water is drained to the nearby river. No use is made, at present, of the silt and fine grit washed from the chippings.

Hanger Lane Station, London Transport

(Concluded from page 12)

Window frames are aluminium to B.S.S. sizes, while the kiosk fronts, ticket office window details, external canopy fascia, handrails, etc., are of simple standard bronze sections in welded combinations. Floors are of compressed concrete tiles in the ticket hall, with red quarries in the lavatories and coloured asphalt in the staff mess rooms, and the ceilings have been finished in two coats of plaster on the woodwool slabs and distempored.

From Western Avenue and the North Circular Road two entrances lead via tiled stairways to a spacious circular area in the centre of which is the ticket booth.

From the ticket hall, where ample natural light is provided by continuous clerestory windows below the domed ceiling, a tiled corridor and staircase give access to the east end of the island platform. Fluorescent lamps provide artificial illumination. The platform roof is still the temporary structure erected when the station was first opened for electric train operation.

Rolling Stock Standardisation, British Railways

A review of progress in the preparation of preliminary designs by Mr. R. A. Riddles

Mr. R. A. Riddles, Member of the Railway Executive, has given a report on the progress which has been made in the preparation of preliminary designs for standard locomotives and rolling stock for British Railways, in the course of which he points out that although in view of the very large numbers of units involved (19,726 locomotives, 55,379 coaching and 1,178,993 freight vehicles), the Railway Executive's policy of standardisation must necessarily be a long-term one, it is expected that in addition to the direct supersession of old units by new ones, considerable use will be made of new standard details in the repair of non-standard vehicles.

Within more restricted fields than are offered on the British Railways today, standardisation both of complete units and components had been in progress in the railway industry for many years before nationalisation, with the objects of concentrating quantity production at the minimum number of establishments, of reducing the range and number of spare parts, and of simplifying and cheapening the processes of inspection, servicing and repair.

An example of the extent to which locomotive standardisation had already been carried during the "grouping" period of the railways was afforded by the L.M.S.R., which between 1923 and 1945 reduced its locomotive stock from 10,316 to 8,049, at the same time reducing the number of different classes from 400 to 133. Considerable progress in rolling stock standardisation had also been made by the other main-line railways.

REASONS FOR VARIATIONS

The Railway Executive, therefore, has inherited the accumulated results of a large number of separate standardisations, but in spite of this, the stock which it has taken over from the former companies is far from being standardised as a whole, for the following reasons:—

(1) Except in the case of the major wagon components, there was no inter-standardisation of complete units nor of components as between the former main-line companies, except in the relatively small extent to which they followed British Standard Specifications.

(2) Because of the long life of the units (from 30 to 50 years) and because of the uneconomic cost of applying new standard details retrospectively to old stock, each former company had within its total stock a number of "layers," or successive stages of standardisation sometimes differing widely in nature.

(3) For the most part former companies were subject to the long-standing custom by which each new Chief Mechanical Engineer initiated fresh standards of his own. A notable exception to this was the G.W.R., which over a period of over 40 years followed a single standardisation scheme for its locomotives under successive Chief Mechanical Engineers.

The Railway Executive took up as one of its first and most urgent tasks, the promotion of the highest practicable degree of standardisation throughout its rolling stock. While this is essentially a matter of long-term policy, it is also one capable of giving progressive savings as it proceeds towards completion, and a many-sided "attack" has been initiated. The main lines of progress are now becoming clearly

visible and the following summarises the lines of development.

Standardisation of complete units is well into its initial stages, and proposals are nearing completion for the first two standard steam locomotive classes out of a possible 12, and for standard type of chassis and mechanical equipment for a single type of diesel shunting locomotive. Preliminary designs are also being worked out for a basic all-steel carriage design suitable for mass production. This subject is in the last stages of decision regarding Civil Engineers' route availability, and on operating and commercial aspects such as size of compartment and number of doors. The final decision will rest on questions of strength and safety and on available manufacturing facilities. Work has commenced on standard merchandise and covered goods wagons, and other types will be dealt with in relation to operating needs.

DETAILS AND MATERIALS

So far as details and materials are concerned, Policy Committees are at work examining present practices and making recommendations for standards, item by item, both for adoption in the complete designs mentioned above and for eventual adoption on existing stock if this can be shown to be economic. A special case is that of wagons, where a R.E. Policy Committee is carrying on the work of the old C.M.E.s, Sub-Committee of the former companies, in continuing the standardisation of wagon details.

The general procedure is for preliminary designs and proposals to be prepared for the Executive Member, either by appointed Policy Committees, or by individual officers deputed for the job. The views of the Regional Officers concerned are obtained, and, after R.E. approval, prepara-

tion of the final designs is remitted to one or other of the Regional Officers. During this last-named stage it is intended to make free use of full size mock-ups of portions of locomotives or vehicles, for examination by interested parties such as Motive Power, Commercial or Operating representatives, or by the trade unions before the designs are finalised.

It is recognised that one of the difficulties in any scheme of standardisation is to keep it fluid, and open to the inclusion of new ideas and improvements as they arise. To meet this objective, it is intended to build prototypes of advanced designs, such as the gas turbine locomotives and light alloy passenger and freight stock, and by continuous experiment to try out improved details. At intervals the existing standard design will be re-examined and proved and tested new features, which offer greater efficiency or availability or reduced cost, will be included in a "Mark II" version of the standard.

The railways in the past have not been able to use British Standard Specifications more widely because the special requirements of safety and the conditions of high-speed movement, which are a feature of railway operation, demand that closer limits and special conditions must be included in their specifications. The B.S.I. on the other hand, having to satisfy industry as a whole, must perforce make its specifications as wide as possible, and as such many of them are not suitable for railway application as they stand.

The biggest result for standardisation in railway rolling stock will arise as increasing numbers of new units are built to standard designs and embodying standard details. A lesser but valuable result will accrue in so far as these standard details can be applied as and when renewals are required to existing stock with little or no structural alteration. There will remain, however, a residue of features and details on the new standard rolling stock where the expenditure involved in applying them to existing vehicles could not be justified.

Institution of Railway Signal Engineers

At a recent meeting of the Indian Section of the Institution of Railway Signal Engineers a paper was presented by Mr. S. M. Gowrishankar, Divisional Signal Engineer, Kotah, B.B.C.I.R. The Chairman of the Section, Mr. H. C. Towers, presided, supported by the Vice-Chairman, Mr. C. Scarff, and the Honorary Secretary, Mr. L. W. H. Lowther, nine members and eight visitors.

The paper dealt with certain problems arising out of the differences of working stations under the classification of "A" and "B" class, long known in India, and the proposals for modifying the "B" class arrangement by removing the warning signal from beneath the outer and placing it at a suitable distance in rear. Apart from the actual arrangement of the signals, the real distinction between "A" and "B" class working lies in the variation of the overlap or distance which must be unoccupied before permission may be given for a train to approach. In the "A" class the line must be unoccupied up to the starting signal. In "B" stations the overlap ends at the home signal, and the warning or through running signal is placed beneath the outer signal. If both arms are cleared the driver knows he has a clear run through. The "A" class station has no outer. An isolated warning stands where a distant signal does in Britain.

The paper was concerned primarily with "B" stations on the double line, and explained how at a certain number on the B.B.C.I.R. between Virar and Baroda permission had been obtained to place the warning signals on separate posts in rear of the outers, apparently making those stations unique in Indian practice. It pleaded for the adoption of those principles generally, and an alteration in the General Rules to permit of that being done.

After the paper, Sir George Cuffe opened a discussion. He questioned whether "A" and "B" class signalling was called for at all. Making rules to cover particular cases complicated and increased the rules and obscured principles.

Mr. Dandekar discussed the comparative safety of the two classes of station. He thought that separate warnings at "B" stations might confuse the drivers.

Mr. C. Scarff said the question had been considered officially, but so far no definite decision had been taken concerning changing the rules.

The Chairman, Mr. H. C. Towers, thought that braking distance should terminate at the first stop signal, and on curves or in cuttings it was wrong to confront a driver with an unwarned stop indication. Where a sighting distance of a mile or more existed the separate warning would be wasteful.

The Leopoldina Railway Co. Ltd.

The annual general meeting of the Leopoldina Railway Co. Ltd. was held at Winchester House, Old Broad Street, London, E.C.2, on Thursday, December 30, 1948. The Rt. Hon. Lord Hawke, Deputy Chairman of the company, presided in the unavoidable absence of the Chairman, Mr. C. H. Pearson.

Lord Hawke said that 1947 had proved to be a most disappointing year, as the financial results amply confirmed. The previous year's operating surplus of £345,000 had been transformed into a working loss of £127,000. This was the first year in its history of 50 years that the company had made a working loss. Taking into account the charges accrued during the year in respect of the debenture issues and the company's guarantee to the Leopoldina Terminal Company, an adverse balance for the year of £518,516 was recorded.

Operating expenses were largely inelastic and intractable, and expenditure on wages including allied charges, and fuel, accounted for no less than 82 per cent. in 1947. Taking 1938 as a basis and giving an index figure of 100, the average wages of daily-paid workers had increased to 168 in 1944, 248 in 1945, 321 in 1946, and to 365 in 1947, and to still more in 1948. Relief could not be found in the cutting down of the labour force for, apart from the fact that railway working demanded a more or less fixed establishment affected hardly at all by fluctuations in the volume of traffic movement, labour legislation in Brazil afforded little freedom of action.

The other large working cost—expenditure on fuel—also was largely dependent on factors outside the company's control. In 1947, imported coal supplies were still restricted and reliance chiefly had to be placed on American coal of unsuitable quality and very high cost compared with pre-war figures. The use of firewood on a large scale had therefore to be continued. This involved a considerable amount of indirect expenditure and the quality of firewood had declined over the years as there was very little first growth virgin forest left in the company's zone.

Receipts were compounded of two factors: the weight and distance of traffic handled and the tariff rate applicable to each class of traffic. The volume of traffic depended in the first instance on the productivity and prosperity of the zone served by the railway. Competition on a large scale began to be felt first in 1947, with the completion of various new roads and the purchase in the United States out of war dollar accumulations of numerous road vehicles.

In the working of the railway, expenditure had shown no reduction. The obligation to raise wage rates in July, in conformity with the Staff Agreement of September, 1946, and rising prices of fuel and materials, had resulted in a small increase. Traffic had been well below those of the previous year. As a result, a substantial working loss had been incurred in 1948. This had not only meant that funds had been completely lacking to make any further distribution of interest on the 4 per cent. debenture stock, but also that the company, with the exhaustion of its working capital, had had to face a grave financial crisis. This position still obtained and must continue to worsen until relief was forthcoming. It had only been by the running down of stores stocks and by the use for revenue expenditure

purposes, with the tacit consent of the Government, of the unspent balances of the two surcharge funds, that it had been possible to keep the railway running.

The situation had been brought to the attention of the Brazilian Government and no effort had been spared to press on them the urgency of a solution. In the meantime, everything possible had been done to reduce expenditure and to foster revenue. The problem was most complex. The usual remedy of a big increase in rates and fares had to be ruled out, for the General Manager and his advisers were firm in their opinion that a general increase in tariffs would, at present, be suicidal, due to the intensive and uncontrolled road competition.

The Brazilian Government indicated in February, 1948, that a radical solution was required and that representatives of the board would be welcomed in Brazil for the purpose of discussing such a solution. Therefore, Major Baring, the Secretary, and the Deputy Chairman arrived in Rio on March 2. It was decided to put forward in a Memorial what would be the company's position should purchase be the ultimate solution, and this was handed to the Government on March 22. This Memorial was first referred to the appropriate Government Departments and then on June 1 a Committee of three independent engineers was set up to report on the whole future of the railway. The Committee reported in October, but the company had not been made acquainted with its findings, and, there-

fore, the Deputy Chairman was not in a position to confirm or deny the various statements which had appeared in the Brazilian press.

The latter half of 1948 had been exceptionally disappointing; the coffee crop had been much more seriously depleted by a boring insect than was expected and there had been less sugar traffic than might have been expected. Other traffics had been hit both by local business depression and by heavy competition from road trucks.

Faced with the situation of operation at a loss and continued delay in the negotiations for a permanent solution, the board had had to formulate some sort of interim policy. Accordingly, they had drawn up for submission to the Brazilian Government, a Memorial stating the essential requirements of the railway, should purchase not take place or be further delayed. Unfortunately, this Memorial had been unable to suggest that the situation could be radically cured by the raising of tariffs; such a solution was prevented by uneconomic road competition.

The Brazilian Government had been left in no doubt as to the effect of its delay in either providing interim finance or of implementing its suggestion for a long-term solution. The board was doing everything it could to point out the seriousness of the situation resulting from the disastrous fall in receipts, which had produced a crisis requiring a far quicker solution than had previously been contemplated.

The report and accounts were adopted.

Pullman Car Company

The annual general meeting of the Pullman Car Co. Ltd. was held in London on December 29, when Mr. Stanley J. Adams, Chairman & Managing Director, said that the accounts might be said to mark the satisfactory completion of the final phase of post-war rehabilitation.

Arrears of debts had been paid off and they had exercised their option to repay the 5 per cent. income stock by an issue of a like amount of 4½ per cent. cumulative redeemable preference shares. These shares were issued at a premium which provided a sum sufficient to cover most of the expenses of the issue. The balance of the cost of issuing the preference shares amounting to £3,493 accrued to the end of the financial year had been written off out of current earnings.

Resulting from the suspension of its services the company had emerged from the war owing seven years' arrears of interest to the income stockholders amounting to over £135,000. These arrears also had been paid off out of current earnings.

The new preference shares would be fully paid on December 31, and would be converted to stock as from January 1, 1949, the first payment for a complete half-year being payable on June 30. However, as the issue of the preference shares took place after September 30, the end of their financial year, the balance sheet did not reflect the new capital set-up.

The balance-sheet showed a healthy state of affairs, and, provided there were no unexpected happenings of an adverse character, results for the current year should show a still further improvement. Current liabilities amounted to £157,000 as against current assets at £424,000.

Gross receipts were up by over £100,000, but working expenses were £115,000 up,

while the cost of maintenance of rolling stock at £63,000 was £6,000 more than in the previous year. After various adjustments had been made, including £53,335 for taxation, there was a net profit of £79,000 as compared with £69,000 for the previous year.

Revenue at present was running in excess of last year primarily due to the fact that the "Queen of Scots" and other trains had not then been inaugurated. The popularity of their services had been increased during the year, which was reflected in the number of passengers carried and in the number of meals served, both of which created a record. Catering had become no easier, however, and in the difficult circumstances, the best had been made of the supplies they could get. Much credit was due to the General Manager, Secretary, and catering and train staff for the satisfactory service they had been able to maintain.

His remarks coincided with the completion of the first year of operation of the B.T.C., during which, despite the difficulties with which the Commission had had to contend, it had achieved a measure of success that gave satisfaction to patrons and employees alike, and the small contribution the Pullman Car Company had made to achieve these results would be looked on by the Pullman management and staff as a service well rendered.

ALDERSHOT & DISTRICT TRACTION COMPANY.—At a meeting of the board of directors of the Aldershot & District Traction Co. Ltd. on December 23, an interim dividend was declared on the ordinary shares at the rate of 8 per cent. actual (19½d. per share), less income tax, in respect of the year ended May 31, 1949.

B.T.C. Bus Interests

For many years it has been our practice to publish an annual table showing railway shareholdings in passenger road transport, and in our issue of March 19 last we issued this for the last time, and added a table showing the B.T.C. interests. At

that time, they consisted of shares in provincial bus companies inherited from the main-line railways, and totalled £9,911,423 nominal. During 1948, the B.T.C. has acquired a number of additional shareholdings, principally from the Tilling

group, bringing its total nominal holdings at January 1, 1949, up to £16,135,005, as shown in the accompanying table. Apart from the Tilling group, the only acquisitions completed during the year were the Balfour Beatty group (Mansfield District, Midland General, Notts & Derby) which passed into the hands of the British Electricity Authority on April 1, and were taken over subsequently by the B.T.C. In addition to shareholdings, the B.T.C. took over from the L.M.S.R. and the L.N.E.R. actual ownership of bus fleets worked in association with Yorkshire municipalities, and these continue to be the only buses outside the London Transport Area which are owned outright by the B.T.C., although, as the table shows, the B.T.C. now owns the whole of the share capital of some of the provincial bus companies.

In Scotland, the group headed by the Scottish Motor Traction Co. Ltd. has been in touch for many months with the B.T.C. with a view to a voluntary sale of the passenger road transport side of its business. Within the past few days it has become known that Red & White United Transport Limited has begun negotiations with a view to a voluntary sale. The latter company is the holding company of the largest independent group of bus companies in Great Britain, which has never had any railway shareholdings. Its principal operating subsidiaries are Red & White Services Limited, Newbury & District Motor Services Limited, Venture Limited of Basingstoke, and United Welsh Services Limited. The approximate areas served by three of these companies are indicated on the folding p'te map which accompanies this issue; United Welsh serves similar territory to that shown on the map for the South Wales Transport Co. Ltd.

WALKING-TOUR TICKETS.—As from January 1, third class walking-tour tickets, at about single fare for double journey, have been issued daily by British Railways, Western Region, on weekdays and Sundays, from Paddington and Ealing Broadway to various stations in the Thames Valley and Chiltern Country. These tickets were one of the most popular rail facilities before the war, as they allow persons, who wish to spend a day in the country, to travel out to one station and return, the same day, from another.

SCOTTISH MOTOR TRACTION.—At the annual meeting of the Scottish Motor Traction Co. Ltd. on December 30, Sir William Thomson, Chairman & Managing Director, said that in the ordinary way the company could have looked forward to many years of successful trading, but the Government had made it quite clear that it was determined to go on with its nationalisation projects. The directors had, therefore, been in touch with the B.T.C. on the principle that the interests of the stockholders would probably be better served by this method than by fighting to the last ditch as had happened in other industries. In view of the negotiations now proceeding it would be unwise to say anything further at present. Only the passenger road transport section of the business would be involved in any sale. This would leave the sales and service, which had assumed much greater proportions in the last few years, and provision was being made for much greater expansion. With regard to the consolidated balance-sheet, current assets plus the outside investments, at book value, less current liabilities, amounted to £5,500,000. This position had been attained by ploughing back profits for many years.

BRITISH TRANSPORT COMMISSION INTERESTS IN PASSENGER ROAD TRANSPORT

Associated undertaking	Issued share capital	Holdings of B.T.C. and its subsidiaries	Approx. No. of vehicles
Aldershot & District Traction Co. Ltd. ...	250,000 Ord. ...	82,721	337
W. Alexander & Sons Ltd. ...	825,000 Ord.* ...	225,000	1,248
David Lawson Limited	250,000 6% Par. Pref. ...	250,000	—
Birmingham & Midland Motor Omnibus Co. Ltd. ...	1,440,000 Ord. ...	720,000	1,542
Brighton, Hove & District Omnibus Co. Ltd. ...	100,000 8% Cum. Pref. ...	—	—
Caledonian Omnibus Co. Ltd. ...	400,000 Ord. ...	400,000	151
City of Oxford Motor Services Limited ...	125,000 Ord. ...	119,365	169
Crosville Motor Services Limited ...	226,000 Ord. ...	113,000	218
Cumberland Motor Services Limited ...	74,000 6% Cum. Pref. ...	—	—
Devon General Omnibus & Touring Co. Ltd. ...	1,100,000 Ord. ...	1,098,856	1,122
Eastern Counties Omnibus Co. Ltd. ...	150,000 Ord. ...	99,998	233
East Kent Road Car Co. Ltd. ...	200,000 Ord. ...	68,196	321
East Midlands Motor Services Limited ...	150,000 7% Cum. Pref. ...	—	—
East Yorkshire Motor Services Limited ...	756,000 Ord. ...	418,788½	620
East Yorkshire Motor Services Limited ...	900,000 Ord. ...	900,000	518
East Yorkshire Motor Services Limited ...	450,000 Ord. ...	154,805	564
East Yorkshire Motor Services Limited ...	200,000 6½% Cum. Pref. ...	—	—
East Yorkshire Motor Services Limited ...	250,000 Ord. ...	125,000	186
East Yorkshire Motor Services Limited ...	300,000 Ord. ...	149,362	251
East Yorkshire Motor Services Limited ...	550,000 Ord. ...	427,112	377
East Yorkshire Motor Services Limited ...	150,000 6½% Cum. Pref. ...	—	—
East Yorkshire Motor Services Limited ...	120,000 Ord. ...	60,000	81
East Yorkshire Motor Services Limited ...	29,750 Ord.† ...	14,875	65
East Yorkshire Motor Services Limited ...	—	—	96
East Yorkshire Motor Services Limited ...	200,000 Ord. ...	199,833	294
East Yorkshire Motor Services Limited ...	500,000 Ord. ...	250,000	67
East Yorkshire Motor Services Limited ...	750,000 Ord. ...	265,772	729
East Yorkshire Motor Services Limited ...	200,000 6½% Cum. Pref. ...	—	—
East Yorkshire Motor Services Limited ...	—	—	52
East Yorkshire Motor Services Limited ...	—	—	49
East Yorkshire Motor Services Limited ...	119,000 Ord. ...	119,000	105
East Yorkshire Motor Services Limited ...	58,000 5% Pref. ...	58,000	—
East Yorkshire Motor Services Limited ...	150,000 Ord. ...	150,000	222
East Yorkshire Motor Services Limited ...	831,041 Ord. ...	367,110	564
East Yorkshire Motor Services Limited ...	300,000 6½% Cum. Pref. ...	—	—
East Yorkshire Motor Services Limited ...	—	—	109
East Yorkshire Motor Services Limited ...	—	—	55
East Yorkshire Motor Services Limited ...	—	—	20
East Yorkshire Motor Services Limited ...	—	—	12
East Yorkshire Motor Services Limited ...	750,000 Ord. ...	373,332	535
East Yorkshire Motor Services Limited ...	281,030 Ord. ...	281,030	43
East Yorkshire Motor Services Limited ...	1,200,000 Ord. ...	530,745	1,696
East Yorkshire Motor Services Limited ...	200,000 6½% Cum. Pref. ...	—	—
East Yorkshire Motor Services Limited ...	—	—	60
East Yorkshire Motor Services Limited ...	1,005,979 Ord. Stock ...	502,989	695
East Yorkshire Motor Services Limited ...	1,000,000 6½% Cum. Pref. ...	—	—
East Yorkshire Motor Services Limited ...	—	—	426
East Yorkshire Motor Services Limited ...	—	—	74
East Yorkshire Motor Services Limited ...	—	—	496
East Yorkshire Motor Services Limited ...	—	—	145
East Yorkshire Motor Services Limited ...	750,000 Ord. ...	242,792	877
East Yorkshire Motor Services Limited ...	542,200 Ord. ...	542,200	353
East Yorkshire Motor Services Limited ...	115,000 Ord. ...	115,000	120
East Yorkshire Motor Services Limited ...	15,200 6% Cum. Pref. ...	15,200	—
East Yorkshire Motor Services Limited ...	250,000 Ord. ...	243,402	229
East Yorkshire Motor Services Limited ...	—	—	26
East Yorkshire Motor Services Limited ...	—	—	38
East Yorkshire Motor Services Limited ...	540,288 Ord. ...	225,815	426
East Yorkshire Motor Services Limited ...	1,627,233 Ord. ...	1,596,824	1,040
East Yorkshire Motor Services Limited ...	150,000 7% Cum. Pref. ...	79,244½	—
East Yorkshire Motor Services Limited ...	—	—	12
East Yorkshire Motor Services Limited ...	390,000 Ord. ...	379,386	275
East Yorkshire Motor Services Limited ...	250,000 Ord. ...	237,562	111
East Yorkshire Motor Services Limited ...	2,000,000 Ord. ...	2,000,000	609
East Yorkshire Motor Services Limited ...	400,000 6% Cum. Pref. ...	400,000	1,105
East Yorkshire Motor Services Limited ...	1,550,308 Ord. ...	—	—
East Yorkshire Motor Services Limited ...	500,000 4% Pref. ...	—	—
East Yorkshire Motor Services Limited ...	—	—	150
East Yorkshire Motor Services Limited ...	507,500 Ord. ...	253,750	617
East Yorkshire Motor Services Limited ...	787,500 Ord. ...	783,372	381
East Yorkshire Motor Services Limited ...	200,000 6½% Cum. Pref. ...	—	—
East Yorkshire Motor Services Limited ...	—	—	53
East Yorkshire Motor Services Limited ...	120,000 Ord. ...	61,448	191
East Yorkshire Motor Services Limited ...	437,500 Ord. ...	214,578	334
East Yorkshire Motor Services Limited ...	24,350 7% Non-Cum. Pref. ...	9,323	—
East Yorkshire Motor Services Limited ...	528,000 Ord. ...	264,000	298
East Yorkshire Motor Services Limited ...	—	—	—
TOTALS	—	16,135,005	21,197

* W. Alexander & Sons Ltd. 1,100,000 Ordinary shares at 15s., of which the Scottish Motor Traction Co. Ltd. holds 600,000.

† Highland Transport Co. Ltd. 35,000 shares at 17s., of which the British Transport Commission holds 17,500.

‡ Note.—United Automobile Services Limited holds 326,263 Ordinary shares in Eastern Counties Omnibus Co. Ltd.

§ Note.—The Western National Omnibus Co. Ltd. holds 1,016,005 Ordinary shares and 89,680 Preference shares in the Bristol Tramways & Carriage Co. Ltd.

Notes and News

Advertisement Office Manager Required.

—An experienced advertisement office manager is required by the *A.B.C. Railway Guide* of London. See Official Notices on page 27.

General Manager Required.—Applications from qualified candidates, preferably between 40 and 45 years of age, are invited for the post of General Manager of a British Railway in Africa. See Official Notices on page 27.

Tasmanian Transport Commission.—Tenders will be received up till noon on Tuesday, February 1, 1949, at the office of the Agent General for Tasmania, 457, Strand, W.C.2, for ten light steam, and eight heavy steam coal-burning locomotives. See Official Notices on page 27.

Canadian National Equipment Orders.—In placing an order with the Canadian Car & Foundry Company, for 25 de-luxe passenger coaches, Mr. R. C. Vaughan, Chairman & President, Canadian National Railways, announced that equipment orders outstanding for the C.N.R. totalled more than £8,000,000 (\$35,500,000).

Grade II Clerks Required.—Applications are invited from qualified candidates for the position of grade II clerks required by the East African Railways & Harbours Administration for the transportation and direction departments, for one tour of 40 to 48 months, with prospects of permanency. See Official Notices on page 27.

British Railways' Exhibit at Schoolboys' Own Exhibition.—The British Railways' exhibit at the Schoolboys' Own Exhibition, which was opened at the New Horticultural Hall, London, on January 1, consists of a gauge "0" model railway constructed by two specially-selected employees of British Railways. The 500-ft. track has flat-bottom rails fixed to sleepers resting on realistic ballast. There is a station designed on post-war lines, a signalbox, goods depot, sidings and an engine shed. Scale models of express trains, representing each of the Regions, an express diesel and a diesel shunting engine, run round the tracks, which are laid out roughly in the form of a rectangle about 30 ft. by 20 ft. The railway

is electrically operated; point motors and train movements are remotely controlled from a large panel containing a mass of miniature levers and switches. The exhibition will be open until January 15 and representatives of British Railways are attending to give advice and assistance to young men who are thinking of making their careers with British Railways.

Locomotive Engineer Required.—Applications are invited from qualified candidates, between 25 and 30 years of age, for the post of locomotive engineer in the London office of a firm of consulting engineers. See Official Notices on page 27.

Institution of Locomotive Engineers.—At a meeting of the Institution of Locomotive Engineers, to be held at the Institution of Mechanical Engineers, Storey's Gate, London, at 5.30 p.m., on January 19, Dr. Gaston Borgeand, Chief Engineer of the Swiss Locomotive & Machine Works, will read a paper on: "The Electric Locomotive in Switzerland, its latest Development. Mechanism, and Some Problems."

Electrical Equipment for Ceylon Diesel Electric Shunters.—As was reported in our issue of December 10, the North British Locomotive Co. Ltd., in association with the General Electric Co. Ltd., recently received an order for eight 625-h.p. diesel-electric shunting locomotives for the Ceylon Government Railway. The locomotives are of the double four-wheel bogie type with single cab and have a starting tractive effort of 35,000 lb. The unit is driven by a Paxman 12 RPH turbo-charged diesel engine through a Wellman-Bibby flexible coupling. A combined main and auxiliary generator unit of G.E.C. design will be used on these locomotives, with the auxiliary generator overhung on the shaft of the main machine, while four G.E.C. self-ventilated axle-hung traction motors, connected in parallel, will be supplied from the main generator and drive the axles through double-reduction gears. The auxiliary generator provides the electrical supply for the radiator fan, fuel transfer pump, priming pump, and exhausters motors, as well as charging the battery for the control circuits, starting, and other services. Automatic control is pro-

vided between the engine governor and the generator field rheostat, which ensures that the engine will not be overloaded, the result being a finely-graded control of speed and tractive effort well adapted to the duties the locomotives are designed to perform. It is possible to start the diesel engine in an emergency by supplying the generator with current generated by the traction motors while the locomotive is mechanically propelled.

Western Australian Government Railways Commission.—Applications are invited and should be sent to the Agent General for Western Australia, Savoy House, Strand, W.C.2, for the positions of Commissioner of Railways, and two Assistant Commissioners. See Official Notices on page 27.

Institution of Railway Signal Engineers.—Mr. B. F. Wagenrieder will read a paper: "Frequency of Signals," before the Institution of Railway Signal Engineers on Friday, January 21. The meeting will be held at 5.30 for 6 p.m., at the Institution of Electrical Engineers, Savoy Place, London, W.C.2.

Diesel Generating Sets for Russia.—Mr. Alan Good, Managing Director of the Brush Electrical Engineering Co. Ltd., Loughborough, announces that that company and J. & H. McLaren Limited, Leeds, recently signed a further contract with the Trade Delegation of the U.S.S.R. for the supply of 2,850 standard self-contained 50-kW. diesel generating sets. This contract is valued at over £5½ million and is believed to be the largest ever placed for a standard range of diesel generating plant. The signing of this contract brings the total value of the order book for the group to more than £20 million.

Southern Region Excursion Arrangements.—Between January 1 and Easter, the Southern Region of British Railways plans to run over 1,400 excursions each month and the programme will include mid-week and Sunday trips from London and suburban stations to Southern holiday resorts from Whitstable to Bournemouth, and to many country towns. The 12s. restaurant-car excursion from Waterloo to Bournemouth will run every Sunday until Easter and evening excursions from provincial towns to

Spanish Railway Centenary Celebrations



Left: New electric locomotive and facsimile locomotive of 1848 at Barcelona. Right: The Minister of Public Works (immediately below the date 1948) with civic and other authorities in the streets of Mataró on October 28, the centenary day (see our issues of December 10, page 656, and December 17, page 689)

None of the vacancies on this page relates to a man between the ages of 18 and 50, inclusive, or a woman between the ages of 18 and 40, inclusive, unless he, or she, is excepted from the provisions of the Control of Engagement Order, 1947, or the vacancy is for employment excepted from the provisions of that Order.

Crown Agents for the Colonies

APPLICATIONS from qualified candidates are invited for the following posts:—
CLERKS GRADE II required by the East African Railways and Harbours Administration for the Transportation and Direction Departments, for one tour of 40 to 48 months, with prospects of permanency. Salary according to age and experience in the scale £462 by £18 to £570 a year. Free quarters and passages. Superannuation fund. Outfit allowance £30. Candidates not over 30 years must hold a General School's Certificate and have had good all-round British Railway training. Commercial and operating experience would be an advantage. Apply at once by letter, stating age, whether married or single, and full particulars of qualifications and experience, and mentioning this paper, to the CROWN AGENTS FOR THE COLONIES, 4, Millbank, London, S.W.1, quoting M/N/21465 (3E) on both letter and envelope.

REQUIRED for Consulting Engineer's London Office, a Locomotive Engineer, aged 25-30. Applicants must have been trained on a British Railway and possess good technical qualifications and a good knowledge of locomotive design and construction. They should preferably be members of the Institution of Mechanical and/or Locomotive Engineers. Pay according to qualifications and experience. Apply in writing, giving full particulars of age, qualifications and experience to: **RENDELL, PALMER & TRITTON**, 125, Victoria Street, London, S.W.1.

SENIOR DRAUGHTSMAN required with experience in Railway Locomotive Motion design.—Apply by letter to **BRITISH TIMKEN LIMITED**, Cheston Road, Aston, Birmingham, 7.

London and from country districts to populous centres will continue and be extended to cover a greater number of stations. Cross-country trips and excursions from coastal resorts to London will be increased, and there will be numerous special excursions for football matches, including the F.A. Cup Final at Wembley.

Agreed Charges.—Applications for the approval of 108 further agreed charges under the provisions of section 37 of the Road & Rail Traffic Act, 1933, have been lodged with the Transport Tribunal. Notices of objection must be filed on or before January 11 next.

Merger of Oil Engine Interests.—At meetings held on December 31, stockholders of Associated British Engineering Limited approved resolutions in connection with the acquisition, by the Brush Electrical Engineering Co. Ltd., of Mirreles, Bickerton & Day Limited, and J. & H. McLaren Limited. Meetings of Brush stockholders were adjourned for a week in the absence of a quorum. Details of the proposed merger were given in our December 17 issue.

New Trunk Road in South Wales.—To help industry in the South Wales development area. Mr. Alfred Barnes, Minister of Transport, is putting in hand a scheme for a new trunk-road near Neath, Glamorgan, at a cost of over £1,000,000. The road will connect with the Jersey marine road, now nearing completion, which leads direct to the Swansea Docks area, and together, these two roads will shorten the present 12-mile journey between Briton Ferry and Swansea by roughly one half. Dual carriageways, each 22 ft. wide, will be built throughout, flanked by cycle tracks and footpaths bringing the total width of the road to 90 ft. The scheme, which will form part of the ultimate Neath by-pass, was prepared by the consulting engineers, Messrs. Rendell, Palmer and Tritton, and the consulting architect was Sir Percy

Western Australian Government Railways Commission

APPLICATIONS are invited and should be sent to the Agent General for Western Australia, Savoy House, 115-116, Strand, London, W.C.2, on or before January 24, 1949, for the following positions:—

COMMISSIONER OF RAILWAYS.

Salary of £3,000 (Australian currency) per annum. Applicants should have a comprehensive knowledge and experience in the management, maintenance, and control of Railways.

ASSISTANT COMMISSIONER.

Salary of £2,000 (Australian currency) per annum. A comprehensive knowledge and experience in the conduct of the commercial, traffic, and accounting aspects of Railway administration and control is required.

ASSISTANT COMMISSIONER.

Salary of £2,000 (Australian currency) per annum. The applicants for this position should be qualified Engineers (Civil and/or Mechanical) and have a thorough knowledge and experience of engineering in relation to the management, maintenance, and control of Railways.

Applicants should provide full information of age, marital state, experience, and technical and academic qualifications.

The successful applicants will be permanently appointed under conditions which provide for long service leave and superannuation benefits to a maximum of £650 (Australian currency) per annum on the basis of 40 per cent. provided out of personal contributions and 60 per cent. by the State on retirement at age 60 (optional) or 65 (compulsory).

S. A. TAYLOR,

Public Service Commissioner,
Western Australian.

GREAT WESTERN SUBURBAN SERVICES (London), by Thomas B. Peacock. Post 8vo pp. viii + 51. 19 photographs, 2 folding maps. In buckram covers, 15s. from booksellers or post free from the author, 30, High Street, Halstead, Essex. Prospectus sent free on request.

Thomas. The contractor is the Cleveland Bridge & Engineering Co. Ltd. It is expected that the work will take about 2½ years.

Lower Fuel-Oil Prices.—Shell-Mex & B.P. Limited announces a reduction of ½d. per gal., or about 10s. a ton, in the prices of its fuel oil and heavy fuel oil for industrial purposes in the United Kingdom, to take effect from January 3.

Institute of Transport, North Western Section.—On January 13, Mr. David Blee, Member of the Railway Executive, will read a paper: "British Railways and the Transport Act, 1947" to the North Western Section of the Institute of Transport. The meeting will be held at the Exchange Hotel, Liverpool, at 6.15 p.m.

Road Transport Executive: Acquisition Notices.—It is announced by the Road Transport Executive that, as at January 1, 1949, between 450 and 500 notices of acquisition had been served on road freight undertakings in accordance with the provisions of Part III of the Transport Act, 1947.

Road Accidents in October, 1948.—The return issued by the Ministry of Transport of the number of persons reported to have died, or to have been injured, as a result of road accidents in Great Britain, during the month of October last shows 403 deaths (compared with 499 in October, 1947), 3,014 seriously injured (compared with 3,311 in October, 1947), and 10,573 slightly injured (compared with 10,844). The number of deaths (403) was the lowest for any October since monthly records were first kept in 1931.

British Transport Officers' Guild.—As from January 1, 1949, the name of the British Railways Officers' Guild has been changed to that of British Transport Officers' Guild, with offices, as before, at 129, Finsbury Pavement, London, E.C.2. The Guild states that it is now prepared

Tasmanian Transport Commission

TENDERS will be received up till noon on Tuesday, February 1, 1949, at the Office of the Agent General for Tasmania, Golden Cross House, 457, Strand, London, W.C.2, for:—

(a) 10 Light Steam Coal-burning Locomotives of 20,000 lb. tractive effort.

(b) 8 Heavy Steam Coal-burning Locomotives of 28,000 lb. tractive effort.

for service on the 3-ft. 6-in. gauge Tasmanian Government Railways, in accordance with general outline specifications which may be obtained on application to the Agent General's Office.

Tenders to be endorsed "Tasmanian Railway Locomotives," and to be submitted in duplicate. The lowest or any tender not necessarily accepted.

APPLICATIONS from qualified candidates, preferably between the ages of 40 and 45, are invited for the post of General Manager of a British Railway in Africa. The post is an important one and candidates will only be considered if they have held senior administrative or technical post and have a wide experience of railway operating. Salary, including representation allowance, £2,900 p.a., contributory pension scheme, free unfurnished quarters, free medical attention. Free first class passages will be provided for the successful applicant and his wife. Write stating age, whether married or single, qualifications, details of experience and present position, as early as possible to: Box "J.V.," c/o J. W. Vickers & Co. Ltd., 7/8, Great Winchester Street, E.C.2. (Amended advertisement).

THE ABC RAILWAY GUIDE of London requires an experienced Advertisement Office Manager. Knowledge of hoteliers' requirements, ability write good space selling letters, and able take responsibility of advertisement "make-up," essential. Only written applications giving full details in confidence of past experience entertained.—THOMAS SKINNER & CO. (PUBLISHERS) LTD., 330, Gresham House, Old Broad Street, London, E.C.2.

to consider applications for membership from eligible staff of all nationalised transport undertakings.

Liverpool Overhead Traffics.—Despite recent fluctuations in traffics, Liverpool Overhead Railway receipts showed an upward trend in December, 1948. During the week ended December 26, traffics were up by £598, at £2,524, and on the aggregate, were £145,918, as compared with £145,059, for the corresponding period of 1947.

Permanent Way Institution, Manchester & Liverpool Section.—The next meeting of the Permanent Way Institution, Manchester & Liverpool Section, will be held in the City Technical College, Byrom Street, Liverpool, on Saturday, January 15, commencing at 2.30 p.m. The agenda includes a paper by Mr. W. Cliffe, of Chester, on: "The History of the Permanent Way."

Stephenson Locomotive Society.—Mr. W. G. Bayden, Chairman of the London & Southern Area Committee, presided at a meeting of the Stephenson Locomotive Society, held at 32, Russell Road, Kensington, London, on January 3. During the meeting, Mr. H. E. Freckleton read a paper on: "The W.D. 2-8-0 Engines," in which he described the Austerity engines' teething troubles and gave details of their work on the ex Great Northern main line between London and New England, Peterborough.

Prompt Arrangements for Special Train.—The Goods Agent, Mexborough, Eastern Region, recently was approached by the General Electric Co. Ltd. for the despatch of 500 electric cookers from its Swinton works, Mexborough, to the Victoria Dock, London, for shipment to Australia on the s.s. *Palana* on December 28. Arrangements promptly were made to forward the necessary number of covered trucks to the goods depot, and contact was made with the freight operating department to ensure that a path would be found for a special train to London. The consignment was

collected by British Railways road delivery vehicles, loaded, and a train made up of twenty-four trucks left the Mexborough yard on December 22.

Packages by Passenger Train.—The Minister of Transport has made the Limitation of Packages by Passenger Train (Revocation) Order, 1948 (S.I. 1948, No. 2699).

B. & S. Massey Limited London Agency.—The London Agent of B. & S. Massey Limited, Mr. G. M. Turnbull, has changed his address to 131, Victoria Street, S.W.1; his telephone number now is Victoria 7971, and his telegraphic address is Dredgeable Sowest London.

Result of Increased Paper Salvage.—Salvage of paper last year was largely responsible for the bigger newspapers now possible. Production of these larger papers will require an estimated 1,500 additional tons of newsprint a week and much of this increased demand must be met by continued waste-paper recovery. During the last four weeks, however, collections have shown a tendency to decline, and stocks of pulp in Great Britain still remain very low.

Forthcoming Meetings

- January 7 (Fri.).—Railway Students' Association, London School of Economics & Political Science; visit to Lots Road Power Station, at 6 p.m.
- January 8 (Sat.).—British Railways, Southern Region, Lecture & Debating Society; visit to the Blood Transfusion Service, Blood Supply Depot, Sutton.
- January 10 (Mon.).—Institute of Public Administration, at Livingstone Hall, Broadway, London, S.W.1, at 6.15 p.m. "The Iron & Steel Federation," by Mr. R. M. Shone, Economic Director & Secretary, Iron & Steel Federation.
- January 12 (Wed.).—Institution of Railway Signal Engineers, at the Westinghouse Brake & Signal Co. Ltd., Chippenham, Wiltshire, at 7.30 p.m. "Principles of Power Point Detection and Control," by Mr. H. W. Hadaway.
- January 12 (Wed.).—Railway Students' Association, London School of Economics & Political Science, Houghton Street, London, W.C.2, at 6 p.m. "Tourism—A Vital Export," by Mr. J. G. Bridges.
- January 13 (Thur.).—Institute of Transport, North Western Section, at the Exchange Hotel, Liverpool, at 6.15 p.m. "British Railways and the Transport Act, 1947," by Mr. David Blee, Member, Railway Executive.
- January 14 (Fri.).—Institution of Railway Signal Engineers, at the London Transport Executive Signal School, Earls Court Station, London, S.W.5, at 6.15 p.m. "Principles of Power Point Detection and Control," by Mr. H. W. Hadaway.
- January 14 (Fri.).—Railway Students' Association, London School of Economics & Political Science, Visit to Lots Road Power Station, at 6 p.m.
- January 14 (Fri.).—Institution of Mechanical Engineers, Storey's Gate, London, S.W.1, at 6 p.m. Applied Mechanics Group: Discussion on "Screw Threads and Loaded Projections." Papers on: "The Distribution of Load in Screw Threads," by Dr. D. G. Sopwith; "Tensile Fillet Stresses in Loaded Projections," by Dr. R. B. Heywood.

Railway Stock Market

Stock markets have started cautiously and in the absence of selling the prices in most sections were firm. Earlier in the week Transport 3 per cent. (1978-88) held their recent rise to 100½ and other Transport stocks also were well maintained. Belief is that there is scope for further gains in gilt-edged even allowing for the small yields now ruling. Comparison suggests that either leading industrials are too high or British Funds are too low, but on the other hand it has to be borne in mind that, regarding industrials, dividend limitation is an important factor. The tendency as usual is for the market to attempt to discount the future, and the assumption is that Sir Stafford Cripps may end or modify dividend limitation this year. Some relaxation of the heavy taxation burden is inevitable in the City view. This has been reinforced by the F.B.I. memorandum to Sir Stafford Cripps which emphasises the urgency for more capital to finance stocks and replace fixed assets.

There was only limited business in foreign railway stocks, with Leopoldina issues losing further ground, statements at the meeting indicating that owing to the heavy losses a point had been reached when the Brazilian Government must either help the company by higher tariffs or other means or decide to take over the railway. Optimistic view in the City is that Brazil may make its intentions known before the end of this month. Meanwhile, the Leopoldina ordinary have eased further to 10, the preference stock to 33½, and the 4 per cent. debentures to 77½, while Leopoldina Terminal 5 per cent. debentures were only 69. Great Western of Brazil ordinary shares were 102s. 6d. San Paulo has been more active around 160. Uruguayan rails have been firmer and higher where changed as a result of Senate approval of the take-over agreement. Central Uruguay ordinary were 11½ and the second debentures 82½.

Antofagasta kept steady at 9½ with the preference 55½ and Nitrate Rails 72s. 6d. United of Havana 1906 debentures remained quiet at 14, with Manila Railway preference shares 9s. 3d., and the "A" debentures 86. Beira Railway bearer shares changed hands around 45s. Canadian Pacifics fluctuated, but, after turning easier, were stronger at 23½. Urgent need for higher tariffs has been stressed by the company, but the market remains hopeful that it will be possible to maintain the dividend, although the increase in investment income this year may be exceptional.

Iron and steel shares have been inclined to strengthen. Dividends should be maintained with ease owing to record production, and that at the earliest nationalisation cannot be effected before May, 1950. Moreover, official estimates of take-over prices for nationalisation purposes are a protection against any sharp fall in market prices. Should nationalisation be abandoned the market prices would go ahead. From another angle it is pointed out that the release of non-steel assets of some companies from nationalisation, officially foreshadowed, means that even in the event of nationalisation some shares may eventually prove to be worth a good deal more than their present estimated take-over values. Vickers were prominent, having moved up further to 34s. on the assumption of an eventual bonus, although this will depend on the nationalisation valuation of the English Steel holding.

News of British Railways standardisation decision in respect of locomotives had no effect on shares of locomotive builders and engineers, which remained firmly held. Beyer Peacock have changed hands at 24s. and the 5½ per cent. preference at 25s. 3d. North British Locomotive marked 24s. 10½d. and the 5 per cent. preference 25s. 6d. Charles Roberts eased to £7½ on the news that the return of capital will not be made until certain tax matters have been settled.

Traffic Table of Overseas and Foreign Railways

	Railways	Miles open	Week ended	Traffics for week		Weeks on road	Aggregate traffics to date			
				Total this year	inc. or dec. compared with 1946-47		Total 1947-8	Increase or decrease		
South & Central America	Antofagasta...	811	26.12.48	£ 62,510	+	£ 11,818	52	£ 2,890,170	+	£ 557,356
	Bolivar ...	174	July, 1948	\$28,960	—	\$69,357	30	\$471,287	—	\$301,893
	Brazil ...	...	...	...	...	...	...	...	...	...
	Cent. Uruguay ...	970	6.11.48	32,712	+	2,978	18	595,105	—	7,652
	Costa Rica ...	281	Oct., 1948	32,228	—	2,750	18	143,847	+	15,796
	Dorada ...	70	Nov., 1948	32,667	+	8,367	48	305,908	—	19,292
	G.W. of Brazil ...	1,040	25.12.48	42,500	+	2,600	51	1,746,000	—	24,600
	Inter. Ctl. Amer. ...	794	Nov., 1948	\$1,094,493	+	\$44,021	48	\$12,165,251	+	\$211,814
	Leopoldina ...	22½	Nov., 1948	\$19,836	+	\$20,483	48	\$1,158,353	—	\$6,894
	Midland Uruguay ...	1,920	25.12.48	64,952	+	4,120	51	2,870,486	—	514,553
	Nitrate ...	319	Sept., 1948	19,608	+	3,123	12	67,355	+	16,721
	N.W. of Uruguay ...	382	15.12.48	14,364	+	2,353	50	300,074	—	81,887
	Paraguay Cent. ...	113	Sept., 1948	5,686	—	1,213	12	16,335	+	1,989
	Peru Corp. ...	274	24.12.48	\$107,772	+	\$40,796	51	\$2,604,595	+	\$1,020,698
	Salvador ...	1,059	Nov., 1948	201,617	+	56,049	21	954,690	+	112,982
	San Paulo ...	100	Sept., 1948	c82,000	+	c4,000	13	c247,000	—	c12,000
	Taltal ...	153½	...	...	...	...	...	...	...	...
	Canada	United of Havana ...	156	Nov., 1948	6,790	—	1,290	22	38,520	+	6,170
Uruguay Northern ...		1,301	25.12.48	46,150	—	5,026	25	1,109,005	—	418,962
Canada	Canadian National...	73	Sept., 1948	1,072	+	52	12	3,308	—	111
	Canadian Pacific ...	23,473	Aug., 1948	10,110,000	+	855,250	35	77,676,250	+	5,854,000
Various	Barsi Light† ...	17,037	Nov., 1948	8,533,000	+	1,724,250	48	81,643,000	+	8,547,750
	Beira ...	202	Nov., 1948	39,090	+	12,360	35	220,792	+	20,077
Various	Egyptian Delta ...	204	Sept., 1948	123,677	—	3,737	52	1,410,947	+	243,408
	Gold Coast ...	607	20.11.48	33,131	—	21,798	34	455,972	+	91,614
	Manila ...	536	Nov., 1948	246,162	+	84,582	35	1,648,016	—	459,522
	Mid. of W. Australia ...	277	Oct., 1948	31,467	+	8,707	18	113,713	+	25,391
	Nigeria ...	1,900	Sept., 1948	412,268	+	62,429	25	2,617,491	+	531,086
	Rhodesia ...	2,445	Sept., 1947	643,980	+	102,833	52	6,787,603	+	612,938
	South Africa ...	13,347	25.12.48	1,395,448	+	234,879	39	51,885,278	+	3,215,733
	Victoria ...	4,774	June, 1948	1,358,791	+	248,144	52	—	—	—

† Receipts are calculated @ ls. 6d. to the rupee